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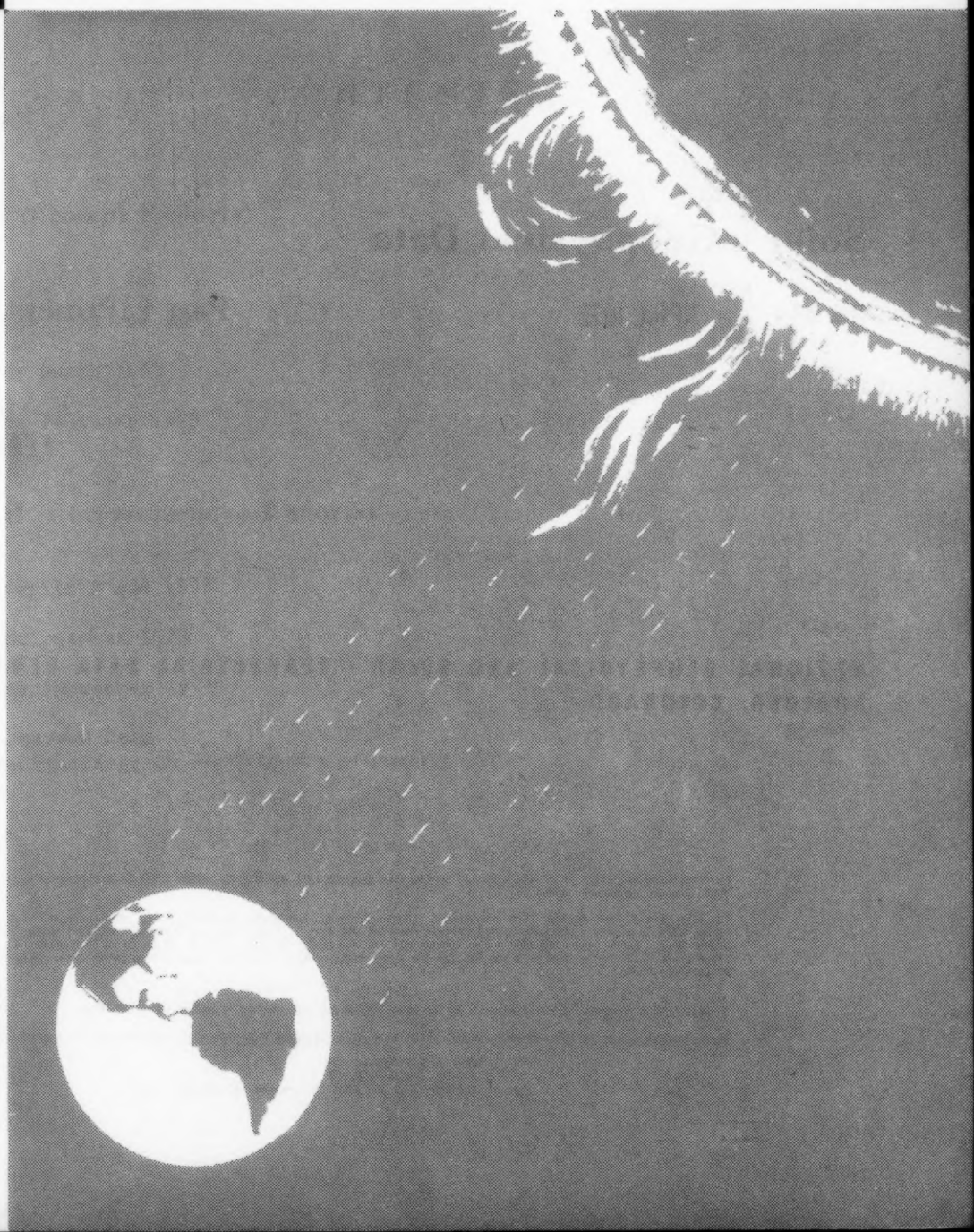
SOLAR-GEOPHYSICAL DATA
(prompt reports)

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

APRIL 1973



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DATA FOR
MARCH 1973
FEBRUARY 1973

U.S. DEPARTMENT OF COMMERCE
Frederick B. Dent, Secretary
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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Solar - Geophysical Data

NO. 344 APRIL 1973

Part I (Prompt Reports)

DATA FOR
MARCH 1973
FEBRUARY 1973

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR - GEOPHYSICAL DATA

No. 344

Issued in two parts

Hope I. Leighton, Editor

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Solar - Terrestrial Data Services Division

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MARCH 1973 DATA

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For explanations of the data contained herein see "Descriptive Text" published as supplement to February 1973 "Solar-Geophysical Data" (Number 342).

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

MARCH 1973

MAR. 1973	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT	
			NO.	TYPE INCLUDING FLARE ACTIVITY EXPECTED
01	0400		01490	SOLALERT
			01491	MAGSTORM ENDS 28/1200Z; N04E10 ACTIVE; TWO QUIET
	1150	CANARY ISLANDS TENFLARE 466 UNITS 01/1117Z DURATION 23 MINUTES		
02	0400		02492	SOLALERT; N07W08 ACTIVE; THREE QUIET
03	0400			N04W16 ERUPTIVE; TWO QUIET; SOLNIL
04	0400			N04W29 ERUPTIVE; TWO QUIET; SOLNIL
05	0400			THREE QUIET; SOLNIL
06	0400			TWO QUIET; SOLNIL
07	0400			S18E45 ERUPTIVE; THREE QUIET; SOLNIL
08	0400			S18E32 ERUPTIVE; THREE QUIET; SOLNIL
09	0400			S07E57 ERUPTIVE; FOUR QUIET; SOLNIL
10	0400			S08E48 ERUPTIVE; FOUR QUIET; SOLNIL
11	0400			S08E37 ERUPTIVE; FIVE QUIET; SOLNIL
	1124	WENDELSTEIN SOFLARE CLASS 1N 04S23E DURATION 13 MINUTES		
	1156	WENDELSTEIN SOFLARE CLASS 1N 04S22E DURATION 12 MINUTES		
12	0400			S07E26 ERUPTIVE; SIX QUIET; SOLNIL
13	0400			S18W28, S07E11 ERUPTIVE; FIVE QUIET; SOLNIL
14	0400			N12W49, S07E01, S13E08 ERUPTIVE; TWO QUIET; SOLNIL
15	0400			S18W48, N12W63, S13W05 ERUPTIVE; THREE QUIET; SOLNIL
16	0400			N13W85, S07W36 ERUPTIVE; FOUR QUIET; SOLNIL
17	0120	KAKIOKA MAGSTORM BEGINS 16/0626Z		
	0400		17493	MAGSTORM BEGINS 16/0627Z MINOR; SIX QUIET
18	0400		18494	MAGSTORM ENDS 16/21XXZ; FIVE QUIET; SOLNIL
19	0400			FOUR QUIET; SOLNIL
20	0400			THREE QUIET; SOLNIL
21	0400		21495	MINOR RECURRENT MAGSTORM EXISTS; N17E21 ERUPTIVE; ZERO QUIET; SOLNIL
22	0400		22496	MINOR RECURRENT MAGSTORM EXISTS; ONE QUIET; SOLNIL
23	0400		23497	MINOR MAGSTORM EXISTS; N17W03 ERUPTIVE; THREE QUIET; SOLNIL
24	0400		24498	MAGSTORM EXISTS MINOR; N15W17, N17E60 ERUPTIVE; TWO QUIET
25	0110	TOYOKAWA TENFLARE 110 UNITS 25/0039Z 10 MIN		
	0400		25499	MAGSTORM EXISTS MINOR; N15E42, N16W35 ERUPTIVE; TWO QUIET
26	0400		26500	MAGSTORM EXISTS MINOR; N14W50 ERUPTIVE; TWO QUIET
27	0400		27501	MAGSTORM EXISTS MINOR; N15W63, N06E18 ERUPTIVE; ONE QUIET
28	0400		28502	MAGSTORM EXISTS MINOR; N15W79, N08E00 ERUPTIVE; ONE QUIET
29	0400		29503	MAGSTORM ENDS; N08W11, S03E57 ERUPTIVE; TWO QUIET
30	0400			S04E44 ERUPTIVE; TWO QUIET; SOLNIL
31	0400			S05E31 ERUPTIVE; TWO QUIET; SOLNIL

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

DAY	1972 FINAL APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1973 PROVISIONAL JAN	FEB	MAR
1	48	28	85	68	103	127	78	75	48	45	7	40
2	43	39	96	74	93	99	65	67	31	53	17	38
3	43	32	105	82	89	79	73	49	28	55	22	35
4	38	34	121	91	85	78	73	30	24	60	21	32
5	42	49	139	104	93	80	67	23	21	72	41	22
6	56	68	115	95	85	81	57	19	18	83	32	32
7	71	79	99	91	65	73	54	8	24	66	34	38
8	73	78	90	82	60	71	52	7	29	60	53	50
9	79	97	79	75	59	59	34	14	42	78	60	53
10	82	94	68	64	47	46	30	12	53	55	61	67
11	74	88	63	62	31	43	34	30	61	52	59	69
12	80	92	52	74	50	36	23	33	64	32	80	92
13	74	106	48	84	55	32	15	30	67	35	83	79
14	63	133	62	80	40	37	8	27	69	15	85	78
15	67	123	88	61	42	45	14	21	71	10	74	73
16	60	125	98	53	57	53	34	25	66	11	54	64
17	55	140	105	59	59	44	30	32	71	27	36	52
18	59	133	95	55	57	38	28	28	58	42	28	44
19	58	127	88	66	57	33	44	42	49	47	18	34
20	65	115	92	56	60	47	60	58	54	60	30	23
21	77	96	100	66	62	60	69	65	67	62	31	20
22	81	79	97	69	85	69	78	69	59	62	25	30
23	83	65	92	65	79	65	85	79	57	60	33	37
24	82	58	88	62	82	77	94	77	48	50	38	29
25	88	56	83	62	71	82	105	65	43	39	48	27
26	83	52	77	77	79	78	111	57	39	27	37	23
27	63	44	79	82	93	77	110	55	34	8	36	32
28	58	44	81	86	110	67	104	61	26	14	36	43
29	38	58	78	102	147	70	89	47	25	7		46
30	22	79	78	108	141	75	98	43	29	16		50
31		85		115	137		93		37	13		56
MEAN	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3	42.2	42.1	45.4

1972 yearly mean = 68.9

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

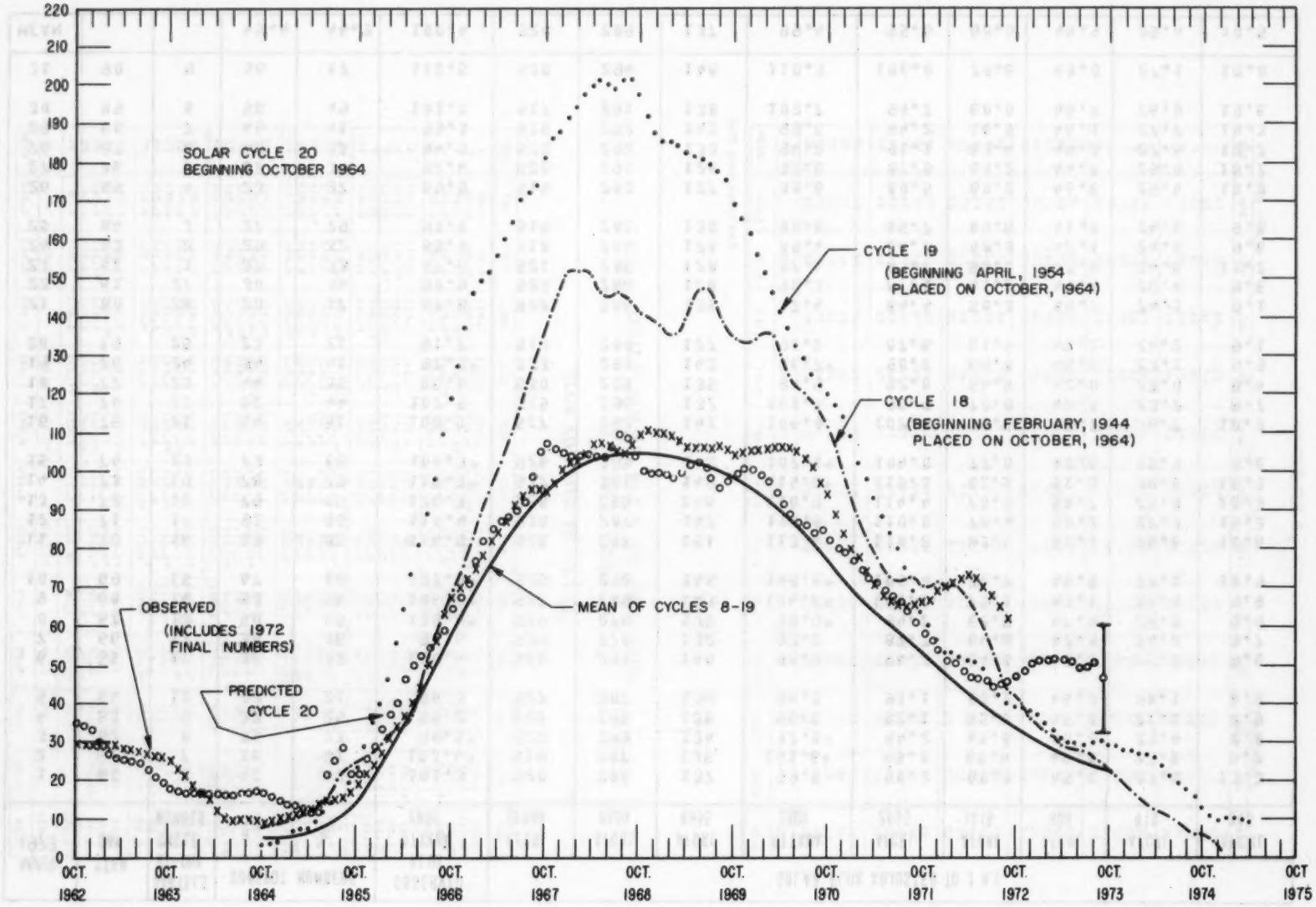
DAY	1972 APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1973 JAN	FEB	MAR
1	96.0	95.8	128.2	133.8	156.3	144.3	114.7*	129.9	91.1	93.9	88.6	99.5
2	97.3	94.9	130.0	137.0	150.4	139.7*	108.4*	121.8*	89.4	98.2	88.6	101.6*
3	98.1	97.7	137.5*	139.9	147.1*	129.4*	107.3	113.9	85.2	105.1*	93.1	97.8*
4	101.8	102.7	149.5*	146.7*	146.0	122.0	103.3	115.8	82.3	109.3*	94.1*	96.6
5	105.3	108.7	164.8	150.2	146.5	117.0*	100.6	102.6	80.4	113.3	94.3	94.8
6	110.1	117.6	159.1	146.1	143.4	119.2	98.4	93.2	77.8	115.8	95.3*	98.9
7	121.3	128.9*	152.7	143.2	139.0*	110.4	96.1	85.7	87.1	112.3	98.5	92.2
8	123.8	128.8*	150.2*	136.7	125.3	115.9	97.2	82.5	91.6*	103.2	100.5	98.9*
9	130.5	133.0	149.1*	127.1	123.8	112.9	100.5	82.3	94.7*	103.7	100.9	104.7*
10	138.3	138.3	139.5	121.7	118.6	107.2	94.7	84.7	97.2*	103.8	102.1*	105.6*
11	129.8	140.8*	143.2*	123.6*	113.3*	102.7	93.5*	88.3	105.1*	102.8	101.2	113.4
12	128.3	140.6	149.7	119.3	107.6	100.6	94.7	88.7	108.9	103.5	104.6*	114.5
13	128.4*	141.6	138.9*	119.9*	101.7	96.6	96.5	86.7	111.2*	100.9*	104.7*	118.9
14	125.8	142.8	136.5	119.5	97.9	99.5	97.0	85.1	114.8*	96.2	105.6	114.0*
15	126.0	144.6	139.5*	117.6	97.6	103.4	102.1*	86.5	116.1*	94.6	104.7	107.1*
16	124.3	141.8	142.7*	115.1	100.6	103.1	106.2	89.6	116.2	93.8	98.7	106.9
17	120.3	139.3	149.6	114.6*	106.4	100.3	112.1*	91.5	111.9	94.2	94.2	101.5
18	115.7	135.5	149.0*	108.9	109.6	102.6	111.0	94.6	112.4	95.3	90.7	94.9
19	115.4	136.7	143.2*	108.9	116.2	106.2	117.1*	99.7	113.2	94.8	88.9	96.7*
20	111.3	132.3	142.5	110.9	117.9	113.2	122.2	109.4	111.4	98.3	89.4	91.0
21	106.9	128.2	139.0*	111.7	119.5	113.4*	132.8*	109.3*	113.4*	97.9	89.9	87.4
22	109.4	143.3	135.1	111.6	127.3*	119.4*	141.7	110.9*	107.9*	98.5	89.7	90.3
23	108.4	135.2	130.7	109.6	122.9*	125.2*	151.2*	115.3*	106.2	97.2	91.4	87.1
24	110.2	135.5	128.5	109.5	122.6	126.8	156.5	115.4*	101.1	96.9	93.6*	89.4
25	111.6	127.3	125.5	112.4	127.8	126.3*	171.8	112.7	103.3*	95.6	97.2	98.8
26	109.9	116.3*	120.8	120.6	137.4*	122.5*	178.8*	108.6	97.7	95.3	95.6	88.6
27	109.8*	114.3	121.9*	127.2	144.1	118.3*	167.6*	102.3	97.6	93.4	98.2	92.8
28	103.2	118.8*	127.3	133.3*	147.2*	116.4	159.1*	97.5	91.9	91.7	100.9*	94.2
29	98.6	116.2	132.4	139.1	163.3*	115.2		92.7	92.8*	91.4		99.8
30	97.8	116.8	134.5	141.2*	163.3	118.5	144.6*	95.1	92.8*	89.7		102.7
31		122.5		150.2	154.2*		148.1*		94.3	87.7		110.3
MEAN	113.7	132.5	139.7	126.8	128.9	114.9	128.2	99.7	99.7	99.8	96.3	99.4

* adjusted for burst

DAILY SOLAR INDICES

MARCH 1973

MAR. 1973	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX	SOLAR FLUX ADJUSTED TO 1 A.U.								
			R_Z	$R_{A'}$	OTTAWA 2800	AFCRL 15400	AFCRL 8800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606	AFCRL 410	AFCRL 245
1	60	6	40	47	101.3	520	288	137	99.5	95.2	65.8	45.8	23.5	13.3
2	61	7	38	41	103.4*	519	287	135	101.6*	95.8	65.4	45.8	23.5	9.2
3	62	8	35	27	99.5*	523	289	134	97.8*	94.2	66.6	46.8	23.4	8.8
4	63	9	32	29	98.2	523	289	135	96.6	92.1	65.8	45.8	21.1	8.9
5	64	10	22	21	96.3	522	287	136	94.8	91.1	63.7	46.0	24.1	8.8
6	65	11	32	33	100.4	524	293	140	98.9	94.3	64.8	48.3	25.2	9.6
7	66	12	38	36	93.6	529	278	132	92.2	87.7	64.6	47.3	24.2	9.7
8	67	13	50	40	100.3*	529	279	135	98.9*	94.2	68.9	47.4	25.2	9.9
9	68	14	53	54	106.2*	527	289	143	104.7*	100.0	73.1	49.1	25.8	9.9
10	69	15	67	66	107.0*	525	296	146	105.6*	105.4	76.7	49.5	27.0	10.9
11	70	16	69	85	114.9	528	297	151	113.4	110.2	81.6	51.1	26.6	11.6
12	71	17	92	96	115.9	530	287	147	114.5	110.0	78.4	50.2	27.3	15.3
13	72	18	79	85	120.3	528	295	148	118.9	114.4	78.9	50.7	28.8	12.3
14	73	19	78	79	115.3*	532	301	149	114.0*	115.3	82.5	51.6	30.5	16.3
15	74	20	73	66	108.3*	526	295	143	107.1*	104.0	77.6	48.6	25.9	9.6
16	75	21	64	51	108.0	527	292	141	106.9	102.3	75.3	47.7	26.7	10.9
17	76	22	52	44	102.5	515	286	132	101.5	95.9	70.6	45.9	23.2	9.7
18	77	23	44	35	95.8	530	289	135	94.9	92.8	64.5	42.0	23.9	9.4
19	78	24	34	41	97.5*	533	298	142	96.7*	98.0	66.8	46.6	23.1	9.9
20	79	25	23	21	91.7	519	289	127	91.0	87.6	61.9	45.2	24.2	9.1
21	80	26	20	17	88.0	522	286	125	87.4	84.4	58.3	50.2	24.1	9.1
22	81	27	30	34	90.9	523	286	128	90.3	87.1	61.2	44.9	26.4	9.6
23	82	1	37	33	87.6	521	285	128	87.1	83.7	58.5	47.0	24.6	11.2
24	83	2	29	32	89.9	518	284	128	89.4	84.8	58.3	42.1	24.5	9.6
25	84	3	27	29	90.5	519	282	130	90.0	85.7	60.6	41.8	24.6	9.8
26	85	4	23	27	89.0	519	283	127	88.6	80.5	60.2	46.6	25.4	10.0
27	86	5	32	34	92.4	520	291	128	92.0	87.5	63.2	44.0	25.9	10.7
28	87	6	43	33	94.5	520	292	130	94.2	91.1	63.4	45.0	27.6	10.2
29	88	7	46	41	99.3	525	292	142	99.0	94.2	66.5	46.1	27.7	10.3
30	89	8	50	49	103.0	517	291	138	102.7	98.7	68.0	46.5	26.8	10.6
31	90	9	56	67	110.5	520	294	146	110.3	106.0	75.6	48.0	27.1	10.8
MEAN			45.4	44.9	100.4	524	289	137	99.4	95.6	68.0	46.9	25.4	10.5



PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS

CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964										9.6	10.2	11.0
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.7	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.0	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.8	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.0	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.8	69.4
1972	70.8	71.2	72.4	73.4	72.9	70.5	68.1	65.4	62.0	62.5 (2)	62.0 (4)	61.1 (6)
1973	60.0 (6)	58.3 (7)	56.3 (7)	54.3 (8)	52.7 (9)	50.7 (10)	49.1 (11)	48.2 (12)	46.6 (14)	44.2 (14)	41.8 (14)	39.7 (14)
1974	38.2 (13)	37.0 (14)	36.1 (15)	35.1 (15)	34.4 (16)	33.2 (16)	31.7 (16)	29.8 (15)	27.6 (15)	25.6 (15)	23.6 (15)	22.1 (15)
1975	20.9 (14)	19.3 (14)										

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1972.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

SOLAR FLARES

PARTIAL LISTING

Solar Flares for which at least one observatory has assigned a numerical importance of "1" or greater.

MARCH 1973

OBSERVATORY	OBSERVED UT				LOCATION						DURATION	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS					REMARKS
	DATE 1973 MAR	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY		MIN.				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hg	MAX. INT. %	
ARCE	01	0825	0839	0835	N07	W06	.266	12246	28.9		14	1N		C	0834	3.06	3.20			
MANI	01	0828	08550	0834	N07	W07	.273	12246	28.8		27D	1B	2		0834	4.13	4.32			
MEUD	01	0828E	0900	0836	N07	W07	.273	12246	28.8		32D	1N		C	0836	2.06	2.10			E
CATA	01	0830	09150	0835	N07	W06	.266	12246	28.9		45D	1B	1		0835	3.48	3.60		(209)	Z
WEND	01	0831E	0858		N07	W07	.273	12246	28.8		27D	2N		P		7.22				
MONT	01	1111	11420	1124	N08	W07	.288	12246	28.9		31D	1B		C	1124	5.67				H
MEUD	01	1117	1200	1124	N06	W08	.266	12246	28.9		43	1B		C	1124	3.09	3.10			FH
WEND	01	1119E	1204		N07	W09	.289	12246	28.8		45D	2N		P		8.25				
ARCE	01	1135E	1205		N07	W09	.289		28.8		30D	SB		C	1135	1.05	1.10			B
CATA	01	1140E	11400	1140	N07	W08	.281		28.9			SB	3		1140	1.16	1.20		(295)	
UPIC	01	1142E	12190		N08	W09	.304		28.8		37D	SB		P	1142	1.29				F
MITK	05	0158	0234	0222	S17	E76	.964	12261	10.8		36	1F		C	0222	1.44				E
WEND	05	1455E	15120		S14	E64	.892	12261	10.4		17D	1N		V		3.09				
RAMY	05	1455E	14560	1455U	S16	E66	.906		10.6		1D	SN	2	C		.65				DE
RAMY	06	1323E	13500	1326U	S15	E52	.783		10.5		27D	SF	4	V		.52				DE
CATA	06	1335	1420	1345	S16	E52	.783		10.5		45	SN	1		1345	.58	.93		(186)	
MEUD	06	1340E	1347D		S15	E51	.772		10.4		7D	SF		C	1341	.62	1.00			CE
ATHN	06	1346E	1412	1346U	S17	E52	.784		10.5		26D	SN	2	C		.66				DE
CAPF	06	1353	1358		S16	E52	.783	12261	10.5		5	1N		P	1355	3.53	6.49			
MITK	08	0435	0459	0443	S07	E70	.936	12263	13.4		24	1F		C	0443	1.13				
MANI	08	0823	0840	0827	S07	E68	.923		13.4		17	SN	1		0827	.31	.63			
ISTA	08	0825	1010		S07	E67	.916		13.4		105	SN			0825					E
ISTA	08														0845					
MEUD	08	0858	0938	0902	S07	E67	.916		13.4		40	SN		C	0927	.62				T
MEUD	08	0858	0938	0927	S07	E67	.916		13.4		40	SN		C	0927	.62				T
TEHR	08	0910E	09160	0910U	S07	E66	.909		13.3		6D	SN	2	V		.33				DE H
UPIC	08	0923E	10120	0930	S07	E68	.923	12263	13.5		49D	1N		P	0930	1.05				FK
HERS	08	0932	0958	0935	S08	E66	.909		13.3		26	SB		P	0935	.44	1.00			D
MITK	08	2357	2413	2403	S06	E59	.853	12263	13.4		16	1N		C	2403	1.34	2.60			
MITK	09	0103	0119	0105	S06	E60	.862	12263	13.5		16	1N		C	0105	1.13	2.20			D
MITK	09	0209	0222	0212	S07	E58	.843	12263	13.4		13	1F		C	0212	1.24	2.40			
MITK	09	0259	0425	0309	S06	E58	.844	12263	13.5		86	1F		C	0309	1.24	2.30			
MANI	09	0327E	0349	0335	S08	E58	.843		13.5		22D	SN	2		0335	.83	1.45			
MITK	09	0429	0448	0437	S06	E56	.825	12263	13.4		19	1N		C	0437	2.17	3.80			E
MANI	09	0429	05030	0437	S08	E57	.833		13.5		34D	SN	2		0437	.93	1.58			
MITK	09	0534	0548	0539	S15	E14	.272	12261	10.3		14	1N		C	0539	2.17	2.10			
MITK	09	0558	0638	0611	S07	E56	.824	12263	13.4		40	1N		C	0611	2.06	3.60			
UPIC	09	1108	1149		S07	E54	.804	12263	13.5		41	1N		P	1109	1.29				FK
CATA	11	1120	1155	1120	S06	E22	.373		13.1		35	SN	3		1120	.29	.31		(156)	
WEND	11	1124	1137		S04	E23	.393	12263	13.2		13	1N		V		3.09				
ATHN	11	1125E	1140	1127	S07	E22	.372		13.1		15D	SB	3	V		.66				DE
RAMY	11	1132E	1155	1132U	S05	E22	.374		13.1		23D	SN	2	V		1.03				DE H
RAMY	11			1146U												.72				DE H
WEND	11	1156	1206		S04	E22	.377	12263	13.1		12	1N		V		3.09				
RAMY	11	1200E	1212	1202	S03	E20	.368		13.0		12D	SN	3	V		.72				DE
TEHR	11	1201E	1212	1204	S05	E22	.374		13.2		11D	SB	4	V		.83				F H
CATA	11	1205	1235	1205	S06	E21	.357		13.1		30	SN	3		1205	.58	.62		(166)	
MANI	12	0357	0443	0405	S16	W24	.424		10.4		46	SN	2		0405	1.34	1.47			
PALE	12	0358	0416	0406	S18	W20	.379		10.7		18	SN	2	C		.72				F
TEHR	12	0359E	0459	0408	S16	W20	.366	12261	10.7		60D	1N	2	V		2.48				F S
TEHR	12			0423												4.62				F S
MONT	12	1046	1201	1120	S19	W21	.400	12261	10.9		75	1N		C	1120	4.64				
TEHR	12	1055	1224	1107	S21	W20	.403	12261	11.0		89	2B	3	V		5.28				U S
RAMY	12	1103	1214	1116	S17	W21	.386	12261	10.9		71	1N	2	C		3.25				U F
ATHN	12	1113E	1218	1113U	S20	W21	.407	12261	10.9		57D	1B	2	C		3.63				U F
TEHR	12	1132	1228	1136	S16	W25	.438		10.6		56	SN	3	V		1.32				U F
ATHN	12	1133	1220	1142	S17	W26	.457		10.5		47	SN	3	C		1.98				U F
MONT	12	1134	12110	1145	S15	W26	.448	12261	10.5		37D	1N		C	1145	2.58				
MANI	13	0514	0537	0524	N10	W46	.754	12259	9.8		23	1N	2		0524	1.96	2.53			
ARCE	13	0858	0920	0903	N10	W49	.785		9.7		30	SF		C	0905	.96	1.50			
MANI	13	0858	09150	0903	N10	W48	.775	12259	9.8		17D	1N	2		0903	1.75	2.70			
MONT	13	0858	0918	0904	N09	W49	.782		9.7		20	SB		C	0904	1.13				H
UPIC	13	0859	0917	0904	N10	W49	.785	12259	9.7		18	1B		P	0904	1.47				K
CATA	13	0900E	0920	0900	N11	W49	.789		9.7		20D	SB	3		0900	.87	1.41		(251)	
MANI	14	0857	01160	0112	S13	E02	.107		14.2		19D	SN	2		0112	1.44	1.46			
MITK	14	0118E	0144	0118	S13	E02	.107	12264	14.2		26D	1F		C	0118	2.06	2.10			CE
MITK	14	0136	0215	0141	N10	W60	.884	12259	9.6		39	1F		C	0141	1.03	2.20			E
MEUD	14	1249	1300	1250	N12	W66	.930		9.6		11	SF		C	1250	.52				
CATA	14	1250	13050	1300	N13	W65	.925	12259	9.7		15D	1N	3		1300	1.16	3.04		(166)	
MEUD	15	1100	1105	1102	N16	W85	.999		9.1		5	SF		C	1102	.31				E

SOLAR FLARES

PARTIAL LISTING

Solar Flares for which at least one observatory has assigned a numerical importance of "1" or greater.

MARCH 1973

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1973 MAR	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
CATA	15	1105	1110	1105	N17	W90	1.001	12259	8.7	5	2N	3		1105	1.44			(151)	
RAMY	15	1213	1239		N16	W80	.991		9.5	26	SF	3	C						DE
CATA	15	1215E	1245	1220	N17	W77	.984	12259	9.7	30D	1F	3		1220	.87			(148)	
RAMY	18	2123	2129D	2127	S07	W73	.953	12263	13.4	6D	1N	2	C		1.21				DE
ATHN	20	1109	1128	1114	N15	E22	.515		22.1	19	SB	2	C		1.32				U F
RAMY	20	1111	1127	1115	N16	E23	.536		22.2	16	SB	3	V		.93				DE
TEHR	20	1111	1126	1116	N16	E21	.516		22.0	15	SB	3	C		1.00				DE H
MONT	20	1112	1125	1116	N16	E22	.526		22.1	13	SN		C	1116	1.13				
MEND	20	1113	1126		N15	E21	.505	12273	22.0	13	1N		V		3.09				
CATA	20	1115	1130	1115	N16	E22	.526		22.1	15	SB	3		1115	1.44	1.70		(224)	
MCMA	22	2119	2125	2120	N11	E70	.951	12280	28.1	6	SF		C	2120	.26	.80			EL
PALE	22	2119E	2120D		N05	E70	.945		28.1	1D	SN	2	V						F
BOUL	22	2121	2127	2122	N10	E70	.950	12280	28.1	6	1F	3	V	2122		2.80			
UPIC	23	0923U	0950	0934U	N06	E62	.893	12280	28.0	27U	1N		P	0934	1.29				
ISTA	23	0929	0958		N07	E64	.909		28.2	29	SF								
TEHR	23	0929	0936	0933	N08	E60	.880		27.9	7	SF	1	C		.64				F
MEUD	23	0931	0935	0932	N08	E63	.903		28.1	4	SN		C	0932	.52	1.00			
ATHN	23	1148	1208	1152	N07	E61	.886		28.1	20	SN	2	C		.83				F
RAMY	23	1148	1205	1152	N09	E60	.882		28.0	17	SN	4	V		.62				DE
MEUD	23	1149	1201	1153	N08	E62	.896		28.1	12	SN		C	1153	.62	1.20			E
UPIC	23	1151E	1201	1153	N07	E60	.878	12280	28.0	10D	1N		P	1153	1.46				F
TEHR	23	1154E	1200	1154U	N08	E62	.896		28.1	6D	SN	3	V		.31				DE
MCMA	23	1554	1605	1557	N04	E65	.912	12280	28.5	11	SN		C	1557	.62	1.50			E
HUAN	23	1554	1606	1559	N02	E62	.887		28.3	12	SN	1	C	1559	.46	1.02			E
HUAN	23	1555	1558	1556	N04	E60	.874		28.2	3	SF	1	C	1556					E
MEUD	23	1555	1605		N04	E63	.897	12280	28.4	10	1F		C	1556	1.03	2.10			E
MITK	24	0303	0450	0308	N18	W24	.565	12273	22.3	107	1N		C	0308	2.17	2.60			E
MANI	24	0304U	0356U	0321U	N15	W27	.568		22.1	52U	SB	2		0321	1.44	1.75			
PALE	24	0311E	0329D	0311U	N16	W23	.534		22.4	18D	SB	1	C		1.80				Z F
TEHR	24	0315E	0410D	0315U	N15	W27	.568		22.1	55D	SB	2	V		1.03				F
UPIC	25	0906	0930	0916	N16	W44	.757	12273	22.1	24	1B		P	0916	1.90				
MANI	25	0907	0923U	0916	N15	W45	.762		22.0	16U	SB	2		0916	1.13	1.75			
ARCE	25	0915E	0938D		N14	W45	.758		22.0	23D	SB		C	0918	1.08	1.70			
PALE	25	2358E	0009	2358U	N15	W52	.829	12273	22.1	11D	1B	2	C		1.44				F
MANI	25	2359U	0009U	0000	N14	W53	.835		22.0	10U	SN	2		0000	1.03	1.81			
BOUL	26	1930E	2100U	1955U	N07	E22	.438	12280	28.5	90U	1N	3	V	1955		3.80			
RAMY	26	1931E	2051D	1931U	N12	E21	.471		28.4	80D	SF	3	C		.74				F S
RAMY	26			1941U							SB								F S
PALE	26	1932	2020	1957	N12	E23	.494		28.5	48	SB	2	V		1.71				DE
PALE	26	1933E	1952	1945U	N15	E21	.503		28.4	19D	SB	2	V		1.03				DE
MCMA	26	1937	2115	2004	N12	E22	.483	12280	28.5	98	1N		C	2004	1.80	2.10			EL
PALE	26	2358E	0000	2358U	N15	W51	.820	12273	23.2	2D	1B	2	V		1.44				F
MCMA	27	1640	1735	1711	N04	E03	.194	12280	27.9	55	SN		C	1711	1.03	1.00			EKL
MEUD	27	1643	1655D		N04	E04	.200	12280	28.0	12D	1F		C	1648	2.17	2.10			U
RAMY	27	1700E	1720	1700U	N04	E05	.206		28.1	20D	SF	3	V		1.29				U S
HUAN	27	1704E	1728D		N03	E04	.184		28.0	24D	SN	2	P	1708	.62	.62			E
RAMY	27	2124	2140D		N15	W77	.983		22.1	16D	SB	2	V						DE
MCMA	27	2127	2131D	2129	N17	W85	.999	12273	21.5	4D	SN		C	2129					
PALE	27	2128E	2146	2130U	N16	W75	.977		22.3	18D	1B	3	V		.93				DE
TEHR	28	1020	1035D	1035U	N16	W85	.999		22.1	15D	SN	3	C		.26				DE
UPIC	28	1039E	1135		N15	W88	1.000	12273	21.8	56D	1N		P	1039	.63				
RAMY	28	1046E	1115	1046U	N15	W84	.998		22.1	29D	SN	2	C		.46				DE
ARCE	31	0855E	0911		N13	E68	.942		5.5	16D	SB		C	0908	.26				DH
MANI	31	0904	0928	0907	N13	E69	.947	12298	5.6	24	1N	2		0907	1.24	2.65			
MONT	31	0904	0916	0908	N14	E70	.953	12298	5.6	12	1N		C	0908	2.27				
CATA	31	0905	0915	0905	N15	E70	.954	12298	5.6	10	1B	1		0905	1.73			(234)	

"Remarks":

A = Eruptive prominence, base at >90°
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No spots visible in the neighborhood.
H = Flare with high velocity dark surge.
I = Very extensive active region.
J = Plage with flare shows marked intensity variations.
K = Several intensity maxima.
L = Filaments show effects of sudden activation.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H or K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line.
S = Brightening follows disappearance of filament (same position).
T = Region active all day.
U = Close and somewhat parallel bright filaments (|| or Y shape).
V = Occurrence of an explosive phase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα emission.
Y = Onset of a system of loop-type prominences.
Z = Major sunspot umbra covered by flare.

Note: Catania and Capri-S express Maximum Intensities in percent of the local undisturbed chromosphere instead of percent of the local continuum. Parentheses are used to indicate this difference.

SOLAR FLARES

Date, time (UT) and coordinates of Subflares not included in preceding table.

MARCH 1973

01 0829 N06 E05	01 0132E N09 W03	01 0140 N09 W03	01 0631 S13 W36
01 0846 N07 W00	01 1237E N03 W12	02 0440 N07 W15	02 0442 N05 W11
02 1834E N08 W24	02 2245 N09 W28	03 0206 N08 W29	03 0550 N06 W26
04 1435E N03 W63	04 1941 N07 W49	05 0820 S17 E70	05 1629 S15 E65
05 2333E S16 E61	06 0150E S15 E60	06 0301 S15 E60	06 0434E S16 E54
06 0828 N07 W56	06 0919E S16 E51	06 0920 S17 E54	06 0921E S17 E54
06 0948E S15 E53	06 1057 N09 W70	06 1520E S17 E51	06 1520E S16 E50
06 1952E S16 E48	07 0409 N19 W82	07 0735 S15 E41	07 0736 S15 E42
07 1538 N14 E36	07 1541 N13 E35	07 2042E S19 E38	07 2121 S20 E37
07 2325E S18 E37	07 2334 S20 E36	07 2335E S17 E39	08 0050E S07 E70
08 0517 S18 E34	08 0740E S18 E33	08 1230 S06 E64	08 1238E S05 F64
08 1621 S06 E63	08 1920 S06 E62	08 2035 S06 E61	09 0120 S06 E59
09 0805 S14 E16	09 0805 S17 E17	09 0809E S15 E17	09 0810 S15 E17
09 1704 S06 E50	09 1743 S10 E48	09 2033E S13 E63	10 0449 S06 E40
10 1633 S08 E34	10 1704 S08 E34	10 1932E S07 E31	10 2220 S08 E32
10 2244 S08 E32	10 2343E S05 E32	11 0010 S07 E33	11 0031 S15 E46
11 0534 S08 E32	11 0702E S06 E23	11 0757 S07 E32	11 0759E S06 E31
11 0907E S05 E22	11 0930E S06 E23	11 1218E S03 E20	11 1230E S05 F21
11 1445E S06 E28	11 1446E S07 E29	11 1744 S07 E17	11 1744 S06 E17
11 1931 S07 E15	11 1931 S05 E17	11 2311 S06 E23	12 0127 S07 E23
12 0333 S17 W19	12 0556 N12 W28	12 0606 N13 W28	12 1156 S19 E11
12 1630 S07 E05	12 1951E S06 E06	12 1951 S07 E14	12 1951 S05 E05
12 2208E S17 W28	13 0320 S06 W01	13 0323 S09 E01	13 0335 N10 W43
13 0606 N13 W48	13 0646E S09 E01	13 0810 S07 W03	13 0834 S07 E08
13 0842E S07 E07	13 0844 S09 E06	13 0845 S10 E08	13 0850 S14 E08
13 0929 S12 E18	13 1142 S21 W35	13 1210 S13 E10	13 1211E S12 E11
13 1221 S09 E16	13 1221 S09 E16	13 1247 N10 W50	13 1248E S09 E16
13 1547 N11 W55	13 1803 N11 W51	13 1807E N11 W55	13 1816 S12 E06
13 1933 S12 E07	13 1933 S12 E07	13 2245E S12 E04	14 0022 S13 E02
14 0138 S17 W46	14 0501 S09 W11	14 0511E N09 W61	14 0725 S12 W03
14 0734 S11 E01	14 0745E N10 W59	14 0745E S13 W02	14 0928E N10 W64
14 1128E S17 W51	14 1128E S17 W50	14 1129E S17 W52	14 1129 S17 W52
14 1157 N10 W52	14 1205 S13 W04	14 1250 S13 W05	14 1346 N11 W64
14 1411E S17 W54	14 1411E S17 W54	14 1412 S17 W54	14 1415 S18 W55
14 1453 S07 W10	14 1506 S17 W52	14 1514 S17 W52	14 1530E S13 W09
14 1825E N15 W62	14 1831E N12 W68	14 2253E S18 W58	14 2253E S17 W55
15 0018 S08 W19	15 0104 S16 W60	15 0145 S08 W19	15 0148E S07 W18
15 0404E N13 W71	15 0426 S10 W26	15 0508 S19 W61	15 0750 S15 W69
15 1015 N09 W13	15 1330E N13 W90	15 1347E N18 W80	15 1455E N20 W90
15 1952 S13 W29	15 2016E S08 W30	15 2042 S13 W28	15 2107E S08 W26
15 2303E S28 W61	16 0230 S12 W24	16 0800E N13 W90	16 0857 N13 W90
16 1115 S06 W40	16 1931 S12 W47	16 1947E S08 W46	16 2024 S11 W47
17 2212 S10 W53	18 1020E S07 W67	18 1135E S09 W65	18 1556 S07 W67
19 0910 S05 W77	19 1230E N15 E37	19 1920 N18 E33	19 2355E N13 E33
20 0045 N15 E31	20 0048E N15 E32	20 0120 N15 E32	20 0510 N16 E25
20 0715 N15 E23	20 0715U N15 E25	20 0722E N15 E24	20 0822 N17 E27
20 0825E N17 E26	20 0928 S12 W78	20 2132E N15 E16	20 2256 N17 E14
21 0755E S06 E31	21 0907E S05 E22	21 0930E S06 E23	21 1850 N15 E08
22 0402U N04 E61	22 0501 N14 E01	22 0503U N12 E01	22 0528 S13 W00
22 0624 N14 W02	22 0624 N12 W01	22 0705 N12 W02	22 0706E N15 W02
22 0833E N06 E78	22 0836 N15 W03	22 0853U N12 W02	22 0854 N15 W02
22 0930E N14 W03	22 0932 N15 W03	22 0934 N15 W03	22 1020 N14 W02
22 1209 N18 W01	22 1335E N05 E73	22 1433E N05 E73	22 1434 N05 E75
22 1918 N14 W08	22 2020 N14 W08	22 2024 N15 W09	22 2027 N14 W07
22 2156E N06 E69	22 2259 N15 W10	22 2259 N15 W10	22 2306 N13 W10
22 2349 N08 E68	23 0053 N15 W11	23 0054 N14 W12	23 0059 N16 W10
23 0124 N16 W10	23 0142U N16 W11	23 0201 N16 W11	23 0201 N16 W11
23 0448U N07 E65	23 0457 N02 E63	23 0457 N02 E63	23 0608 N07 E64
23 0634U N04 E65	23 0644 N06 E62	23 0746 N15 W15	23 0752E N13 E18
23 0841 N15 W16	23 0842 N05 E62	23 0843U N14 W17	23 0923U N15 W18
23 1320 N09 E59	23 1321 N08 E59	23 1321 N08 E59	23 1321 N08 E62
23 1348 N04 E67	23 1423 N15 W21	23 1424 N15 W19	23 1446 N14 W20
23 1540 N08 E58	23 1635 N15 W22	23 1717E N17 W17	23 1758 N06 E57
23 1919 N15 W24	23 1919 N15 W23	23 1948 N16 W22	23 1949 N15 W24
23 2042 N15 W24	23 2135E N15 W26	23 2138E N15 W23	23 2218E N15 W23
23 2346 N15 W24	23 2349 N15 W26	24 0051 N07 E54	24 0130 N14 E61
24 0457 N15 W29	24 0503U N16 W27	24 0612 N16 W29	24 0643U N15 W29
24 0925E N14 W30	24 1005E N27 W15	24 1047E N27 W15	24 1052E N07 E48
24 1153 N15 W30	24 1157E N15 W32	24 1243 N06 E46	24 1253 N07 F53
24 1313 N13 W34	24 1330 N07 E46	24 1333 N07 E47	24 1334E N06 E48

01 0631 S13 W35	01 0715 N10 W06		
02 1128 N11 W21	02 1358E N14 W06		
03 0552E N15 W28	03 2019 N05 W34		
05 1745 S17 E61	05 2204E S15 E60		
06 0817 N08 W56	06 0819 S17 E57		
06 0924E S15 E53	06 0940E S17 E57		
06 1948 S16 E48	06 1950 S16 E48		
07 0737E S16 E41	07 0740 S15 E41		
07 2122 S18 E38	07 2259 S19 E37		
08 0200 S06 E71	08 0224E S06 E69		
08 1314 S06 E64	08 1445 S05 E63		
09 0518 S15 E18	09 0723E S07 E55		
09 0815 S15 E16	09 0829 S08 E52		
10 1455E S13 E53	10 1458 S14 E52		
10 2229E S07 E28	10 2243E S05 E29		
11 0032 S05 E32	11 0110 S05 E35		
11 0800E S07 E33	11 0905 S06 E23		
11 1256E S05 E29	11 1434 S08 E27		
11 1915 S06 E16	11 1915 S06 E16		
12 0205 S07 E23	12 0230 S07 E23		
12 1530 S13 E21	12 1534 S13 E22		
12 1955 S18 E07	12 2100 S17 W30		
13 0836E S06 E06	13 0837 S07 E06		
13 0854 S09 E07	13 0900E S09 E08		
13 1211 S12 E09	13 1211 S13 E09		
13 1249 N10 W51	13 1545 N11 W52		
13 1821 S13 E05	13 1930E S12 E06		
14 0046 S07 W07	14 0137 S19 W48		
14 0732 N10 W58	14 0734 S11 E01		
14 0934E N10 W58	14 0936E N11 W61		
14 1147 N13 W52	14 1155 N12 W52		
14 1350 N10 W54	14 1350 N09 W65		
14 1442 S14 W09	14 1442 S14 W09		
14 1530E S17 W49	14 1700 N10 W67		
14 2322E N18 W60	14 2345 N11 W67		
15 0220E S07 W19	15 0343 N12 W75		
15 0820 N12 W72	15 0830 N15 W80		
15 1600 S13 W20	15 1735 S10 W31		
15 2205E S08 W30	15 2247E S07 W31		
16 0948 N08 W07	16 1115 S14 W34		
16 2029 S07 W46	16 2152 S07 W45		
19 0705U S08 W74	19 0706 S08 W76		
20 0000U N15 E31	20 0010 N17 E12		
20 0511 N16 E23	20 0713 N16 E23		
20 0824 N16 E27	20 0825 N17 E27		
20 2256U N16 E16	21 0010 N16 E14		
21 1902E N17 E07	21 2216 N06 E87		
22 0531 N12 E01	22 0532 N14 E01		
22 0707 N14 W02	22 0708E N13 W02		
22 0854 N15 W02	22 0856 N15 W01	22 0856E N13 W03	
22 1023 N09 E59	22 1209 N15 W04		
22 1625E N17 W09	22 1918 N15 W07		
22 2028E N16 W11	22 2034E N15 W10		
22 2328 N13 W10	22 2342E N15 W10		
23 0105 N16 W11	23 0124 N16 W10		
23 0207 N15 W11	23 0217U N16 W12		
23 0609 N05 E63	23 0612U N04 E65		
23 0825 N15 W16	23 0836 N15 W17		
23 1006 N15 W17	23 1246E N03 E67		
23 1324E N07 E61	23 1335 N07 E60		
23 1447 N08 E59	23 1449 N07 E59		
23 1800 N07 E56	23 1917 N15 W22		
23 2040E N16 W22	23 2042 N15 W25		
23 2310 N15 W26	23 2312 N15 W24		
24 0221E N05 E55	24 0405U N15 W27		
24 0920 N14 W28	24 0921 N15 W30		
24 1135E N14 W32	24 1152 N15 W32		
24 1258 N07 E47	24 1300E N07 E46		
24 1715 N12 W34	24 1718 N12 W35		

SOLAR FLARES

MARCH 1973

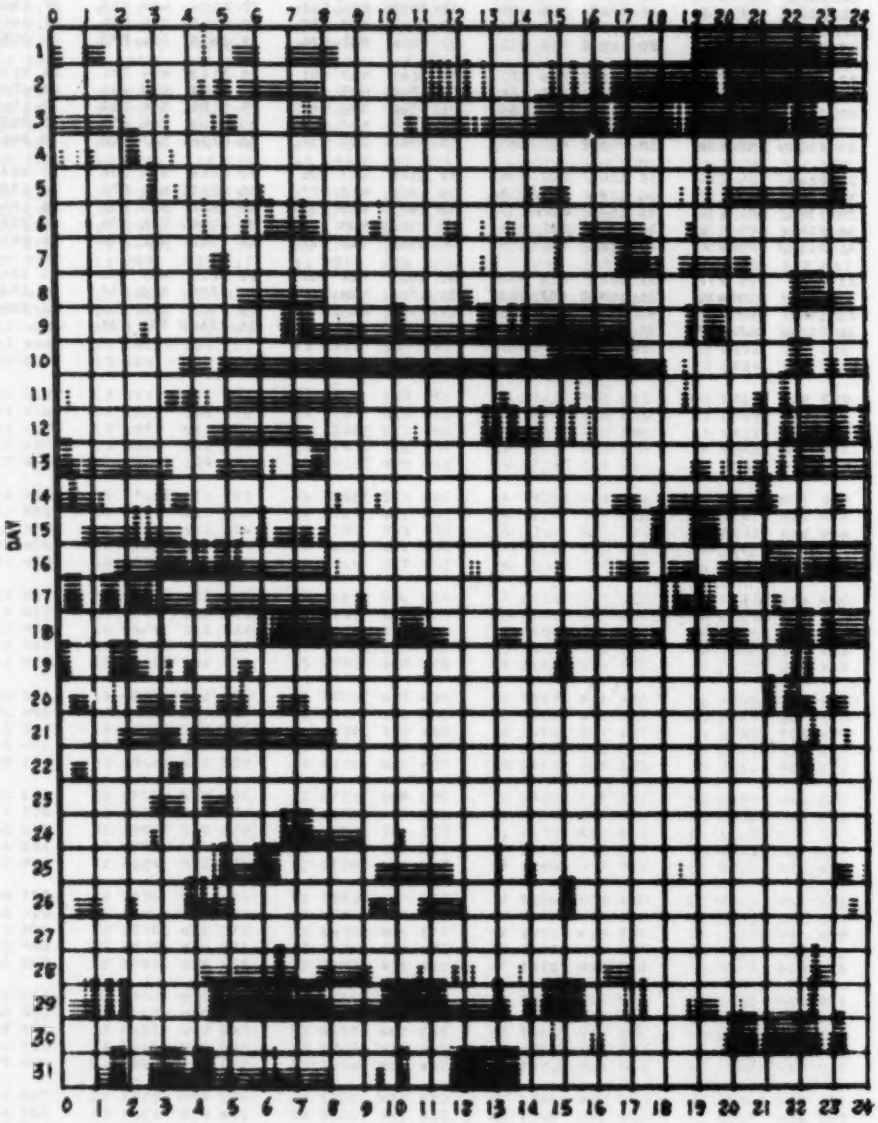
24	1718	N13	W34	24	1837E	N16	E49	24	1900E	N05	E44	24	1904E	N06	E45
25	0031	N15	W38	25	0035U	N15	W39	25	0040	N15	W38	25	0253E	N08	E26
25	1213	N05	E41	25	1449	N14	W47	25	1500	N15	W48	25	1616	N15	W48
25	1906	N17	W45	25	1929	N13	W48	25	1948	N13	W47	25	2047	N14	W50
25	2109	N06	E29	26	0249	N08	E27	26	0253E	N08	E27	26	0353U	N14	W57
26	1518	N14	W61	26	1832E	N16	W62	26	1915	N17	W63	26	1915	N14	W62
26	1921E	N14	W60	26	1939	S05	E90	26	1939	N05	E90	26	2122	N16	W66
26	2154	N16	W66	26	2206E	N17	W65	26	2208	N16	W65	27	0920E	N05	E07
27	0923	N06	E08	27	1441	N15	W74	27	1443	N15	W73	27	1445	S03	E77
27	1448E	S06	E78	27	1452E	S05	E80	27	1629E	N13	E10	27	2024	S07	F75
27	2205E	S08	E81	27	2239E	S04	E72	27	2328E	S05	E72	28	0101	N03	W01
28	0333	N08	W02	28	0334	N08	W03	28	0725	S07	E69	28	1740	N03	W12
28	2000	S07	E66	28	2058E	S07	E66	28	2100E	S06	E60	29	0340	S06	E61
29	1912E	S06	E49	29	1925E	S03	E45	29	2000E	S06	E49	29	2003	S07	E49
29	2203E	S06	E47	30	0330U	S03	E38	30	0505E	N12	E85	30	0543	S03	E37
30	0825	S02	E36	30	0840	S04	E34	30	0844	S02	E36	30	0846	S03	E36
30	0935E	N07	W28	30	1222	N10	E77	30	1224	N11	E75	30	1224	N12	E77
30	1326	S04	E34	30	1328E	S04	E32	30	1525	S07	E32	30	1527	S05	E32
30	1847E	S08	E31	30	2245E	S05	E26	30	2328E	S07	E31	30	2350E	S09	E28
31	0033E	N10	W35	31	0110U	N09	W30	31	0223	N11	E70	31	0510	S05	E26
31	0717	S06	E24	31	0738	N10	W32	31	1025	N10	W32	31	1025	N10	W32
31	1421	N11	W37	31	1545	N08	W34	31	1648E	N07	E63	31	1717	N08	W36
31	1730	N08	W35	31	1947	N08	W37	31	1950	N10	W36	31	1951	N09	W33
31	2001	S05	E19	31	2100E	N12	E59	31	2222U	N09	W39	31	2300U	N09	W39

24	2218	N17	W35	25	0031	N15	W38	25	0505U	N14	W42	25	0943E	N13	W43
25	1654	N17	W48	25	1731	N08	E32	25	2047	N14	W50	25	2052E	N13	W49
26	0356E	N13	W58	26	1145	N16	W58	26	1516	N14	W61	26	1521E	N14	W60
26	1916	N15	W64	26	1918	N14	W63	26	1921E	N14	W60	26	2124	N15	W64
26	2150	N15	W65	26	2154	N16	W66	27	0922	N08	W03	27	0922	N06	E09
27	1446	S04	E75	27	1447	S04	E80	27	1448E	S06	E78	27	1452E	S05	E80
27	2025E	S04	E75	27	2055E	N08	E02	27	2205E	S08	E81	27	2239E	S04	E72
28	0103E	N04	E01	28	0106U	N03	W02	28	0333	N08	W02	28	0334	N08	W03
28	1740	N03	W12	28	1756	N04	W12	28	2000	S07	E66	28	2058E	S07	E66
29	1125E	S06	E53	29	1745E	N13	E90	29	1912E	S06	E49	29	1925E	S03	E45
29	2009	S06	E50	29	2124	N03	W25	29	2203E	S06	E47	30	0330U	S03	E38
30	0738E	S07	E40	30	0813E	S05	E35	30	0825	S02	E36	30	0840	S04	E34
30	1225E	N14	E76	30	1326	S04	E34	30	0935E	N07	W28	30	1222	N10	E77
30	1546	S04	E32	30	1841	S07	E30	30	1326	S04	E34	30	1328E	S04	E32
30	2355U	S06	E26	30	2355U	N09	W29	30	1847E	S08	E31	30	2245E	S05	E26
31	0515	N07	W38	31	0649	S06	E24	31	0033E	N10	W35	31	0110U	N09	W30
31	1213	N07	W46	31	1340	N12	E64	31	0717	S06	E24	31	0738	N10	W32
31	1729	S10	E17	31	1730	S05	E21	31	1421	N11	W37	31	1545	N08	W34
31	1959	S09	E16	31	2000	S10	E17	31	1730	N08	W35	31	1947	N08	W37
31	2348U	S04	E21					31	2001	S05	E19	31	2100E	N12	E59

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

MARCH 1973



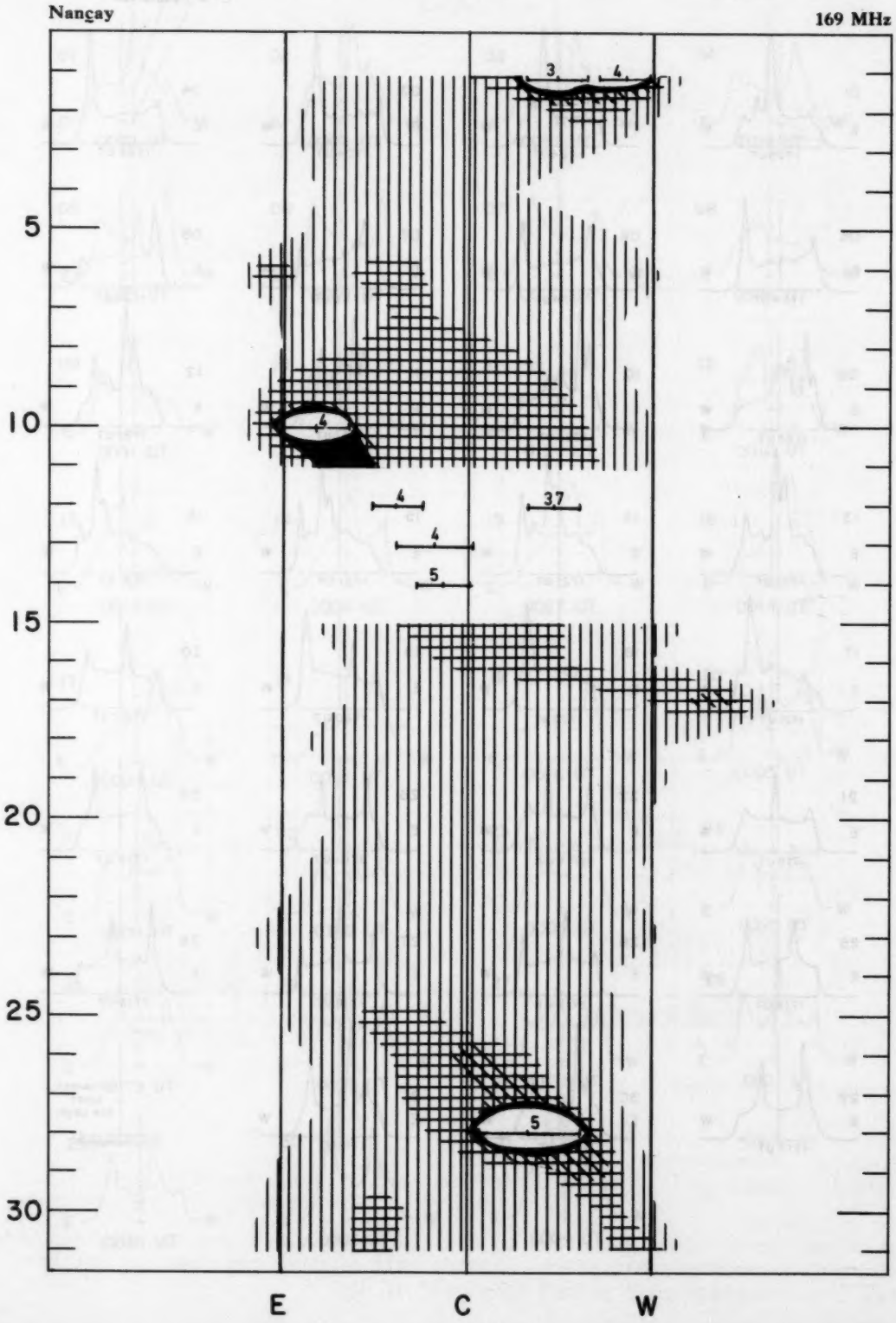
Observatories included in total patrol:

Arcetri	Capri-F (German)	Istanboul	Meudon	Ramey
Athenes	Herstmonceux	Manila	Mitaka	Tehran
Bucharest	Huancayo	McMath-Hulbert	Monte Mario	Upice
			Palehua	Wendelstein

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

MARCH 1973



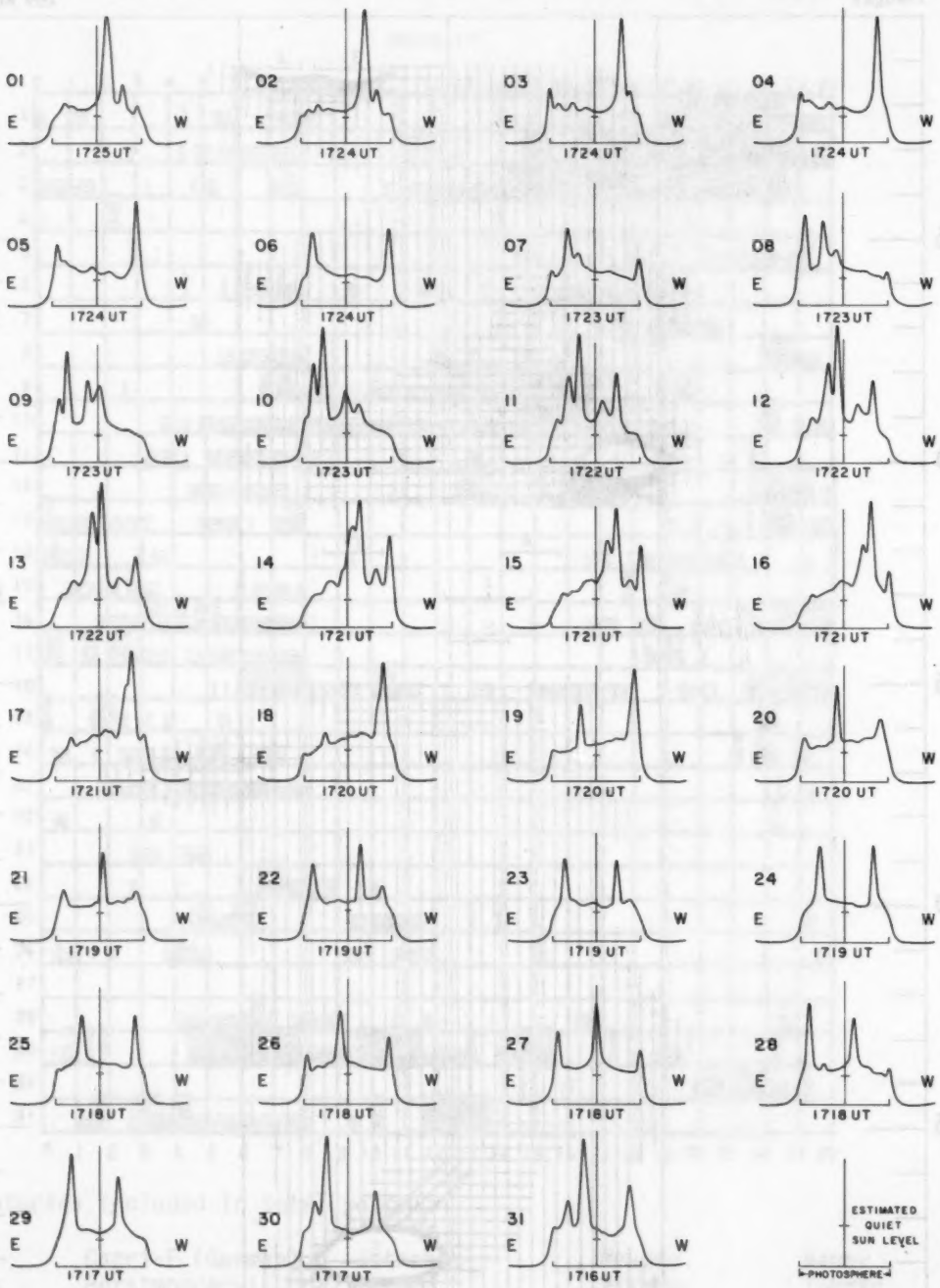
16
Mar 73

EAST - WEST SOLAR SCANS

March 1973

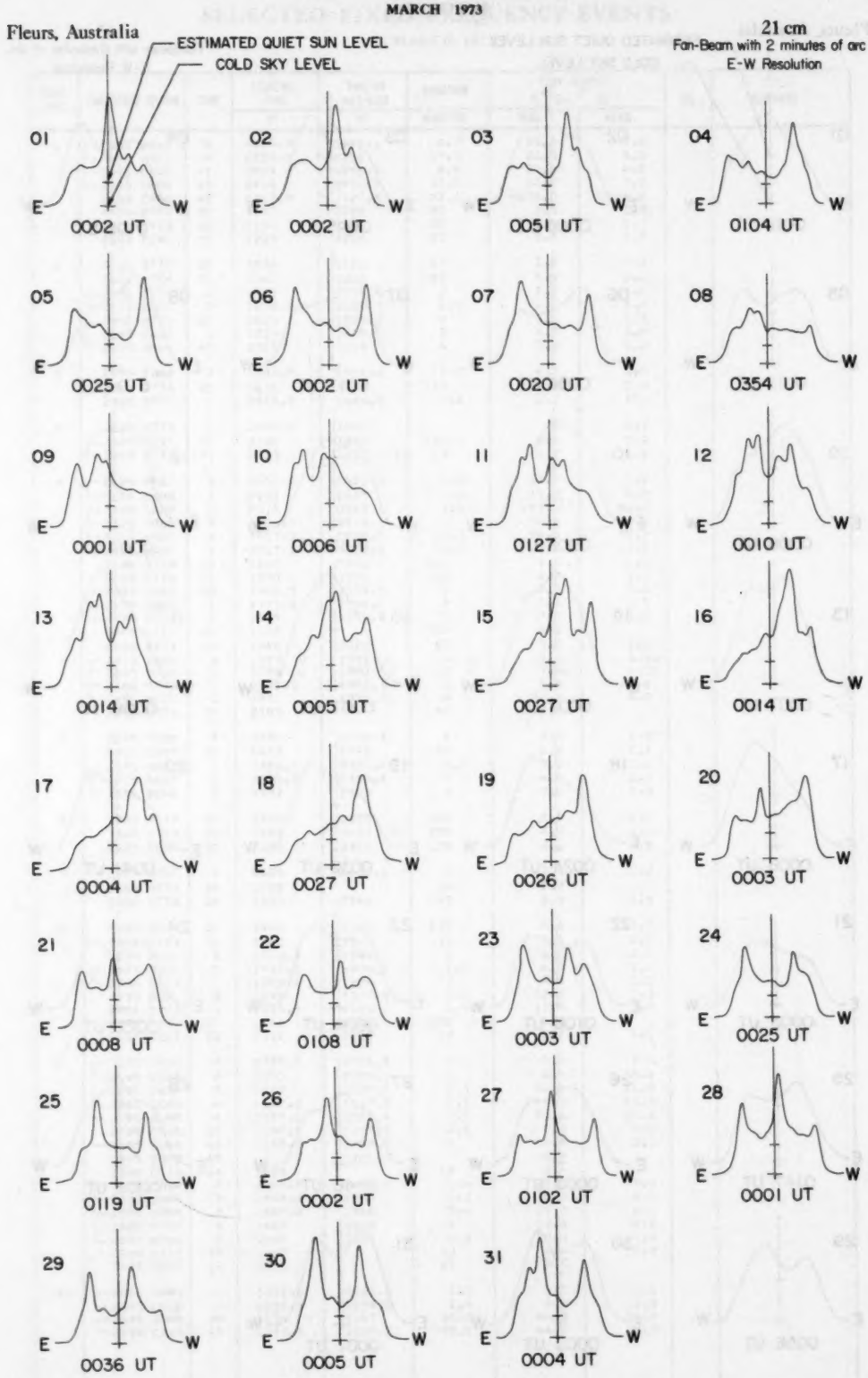
ALGONQUIN RADIO OBSERVATORY
CANADA

Fan - Beam with 1.5 minutes of arc
E - W Resolution



EAST-WEST SOLAR SCANS

MARCH 1973



EAST-WEST SOLAR SCANS

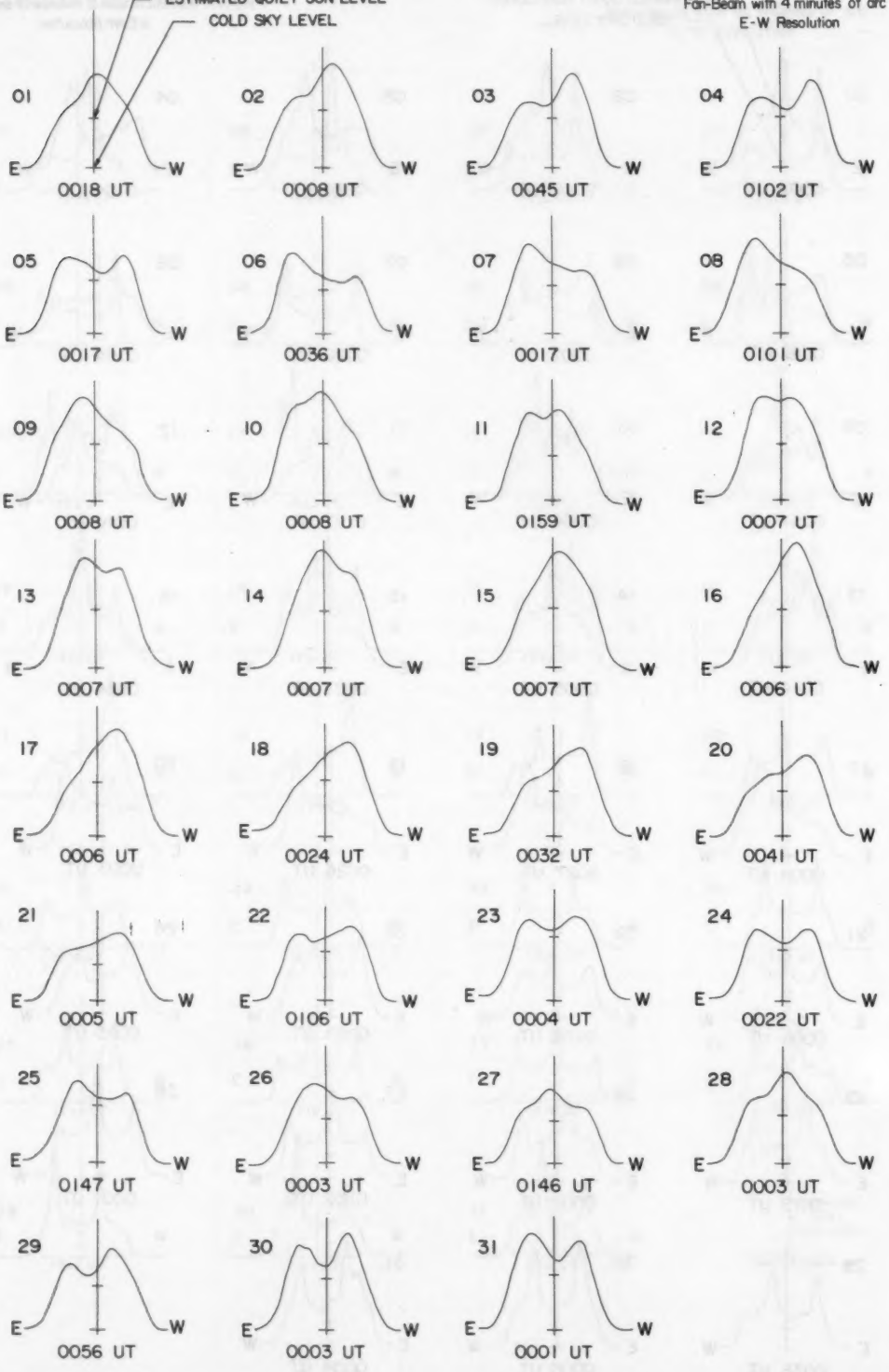
MARCH 1973

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL

COLD SKY LEVEL

43 cm
Fan-Beam with 4 minutes of arc
E-W Resolution



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
MARCH 1973

MAR. 1973	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
1	8800 MANI	4	0828.5	0831.1	6.7	23.5	9.0		
	2695 MANI	4	0828.5	0831	10.7	21.6	8.2		
	2695 CRON	45	0829	0830.5	8.5	21.0	4.0		
	2695 CANR	45	0831	0832.5	10.5	12.0	3.0		
	2695 CANR	47	1117.5	1127.5	22.5	6656.0	1004.0		
	2800 OTTA	20	1255	1335	90	3.6	2.0		
	2800 OTTA	20	2130	2140	20	1.4	0.7		
	2695 PENT	20	2225	2230	30	2.2	1.1		
2	2800 OTTA	20	1515	1520	15	1.0	0.5		
	2800 OTTA	21	1545	1812	250	5.8	2.1		
	2800 OTTA	1	1818	1818.8	2	2.2	1.0		
	2695 BOUL	3	1818.5	1819.5	1.5	4.0	1.0		
	2800 OTTA	45	1824	1827.2	9	3.6	1.3		
	2695 CANR	3	1824	1825.5	2	8.0	3.0		
	2695 BOUL	45	1825	1828	4	7.0	2.0		
3	2695 CANR	3	1343.5	1344.5	1.5	4.0	1.0		
	2800 OTTA	20	1610	1710	120	1.4	0.7		
	2800 OTTA	1	2018.2	2019.5	1.8	2.2	1.1		
5	2800 OTTA	1	1606.9	1607	1	.6	0.3		
	2695 PENT	21	2150	2250	160	5.8	2.9		
	2800 OTTA	22	2155	2202	15	3.2	1.6		
6	2695 MANI	3	0431.8	0432.5	2.9	17.7	7.1		
	2695 CRON	3	0431	0432	3.5	15.0	5.0		
	2695 CANR	3	0915	0917	7.5	102.0	32.0		
	2695 CRON	8	0916.5	0918	7	72.0	29.0		
	8800 MANI	4	0917.2	0919.7	10.3	54.0	29.2		
	2695 MANI	4	0917.2	0918.8	10.3	62.0	20.4		
	2800 OTTA	21	1240	1250	160	2.2	1.1		
	2800 OTTA	21	1330	1335	45	2.2	1.1		
	2695 CANR	45	1332.5	1333.5	2	5.0	2.0		
	2695 SGMR	1	1333.2	1334.7	6	3.5	1.5		
	2800 OTTA	1	1334	1334.8	1	3.0	1.5		
	2800 OTTA	24	1455		60	3.6			
	2800 OTTA	21	1940	2020	80	3.2	1.6		
	8800 SGMR	3	1950 U	1952 U	10 U	21.2U	8.8U		
	2695 SGMR	1	1950 U	1952 U	10 U	9.6U	4.2U		
	2800 OTTA	1	1951.8	1952.1	2	6.4	3.2		
	2695 BOUL	3	1951	1952.5	4	11.0	4.0		
	2800 OTTA	26	2100		80	2.5			
7	2695 CRON	3	0734	0736.5	4	7.0	2.0		
	2800 OTTA	20	1455	1553	95	2.2	1.1		
	2695 MANI	1	2331.5	2332.5	3.1	7.2	2.4		
	2695 PENT	1	2331.8	2332.4	2	4.6	2.3		
	2695 BOUL	8	2332	2333	2	7.0	3.0		
8	2800 OTTA	20	1250	1320	120	2.0	1.0		
	2800 OTTA	20	1505	1620	265	2.2	1.1		
	2695 PENT	20	2150	2300	175	2.0	1.0		
9	2695 MANI	1	0429	0430.1	2	2.4	1.2		
	2800 OTTA	24	1515		30	2.7			
	2800 OTTA	20	1610	1740	145	3.0	1.5		
10	2800 OTTA	21	1422	1705	405	4.6	2.3		
	2800 OTTA	20	1540	1543	12	1.4	0.7		
	2695 BOUL	8	1743.5	1744	1	6.0	2.0		
	2695 BOUL	3	1923.5	1924.5	1.5	4.0	1.0		
	2800 OTTA	1	1923.5	1924	2	2.4	1.2		
	2695 BOUL	8	2135	2135.5	1.5	12.0	5.0		
	2800 OTTA	3	2139.5	2140	1.5	11.4	3.0		
	2695 PENT	21	2140	2310	200 D	4.0			
	2695 PENT	22	2210	2217	25	2.2	1.1		
11	2695 CRON	8	0755.5	0756.5	2	9.0	3.0		
	2695 CANR	8	0755	0755.5	1	9.0	3.0		
	2695 CANR	8	1125	1125.5	2.5	56.0	21.0		
	8800 SGMR	4	1127.2	1127.3	2.1	49.0	12.3		
	2695 SGMR	4	1127.2	1127.4	2.1	53.6	13.4		
	2695 CANR	45	1156.5	1157.5	2.5	7.0	2.0		
	2695 SGMR	45	1158.9	1159.7	4	6.5	2.0		
	2695 SGMR	45		1201.7		5.9			
	2800 OTTA	24	1415		12	2.4			
	2695 CANR	8	1443.5	1444.5	1.5	20.0	7.0		
	8800 SGMR	3	1445.3	1446	3.2	16.3	4.0		
	2695 SGMR	3	1445.2	1446	5.4	16.8	4.1		
	2800 OTTA	3	1445	1446	2	17.8	8.8		
	2695 BOUL	8	1446	1447	4.5	20.0	7.0		
	2800 OTTA	29	1447		13	2.4	0.8		
	2695 PENT	24	2250		40	3.0			
12	2695 MANI	1	0222.8	0223.2	1.1	5.3	2.1		
	2695 CRON	3	0222.5	0223.5	1.5	5.0	2.0		
	2695 SGMR	40	1134 U	1147	38.5U	44.8	20.0		
	2695 CANR	45	1157.5	1145.5	98.5	44.0	8.0		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
MARCH 1973

MAR. 1973	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	2695	CANR	3	1532.5	1533	1	4.0	1.0		
	2800	OTTA	21	1533	1535	10	1.4	0.7		
	2695	BOUL	3	1534.5	1535	1.5	4.0	1.0		
	2800	OTTA	1	1534.2	1534.7	1	1.6	0.8		
	2800	OTTA	21	2045	2300	240 D	5.0			
	2800	OTTA	1	2117.9	2118	.6	1.6	0.8		
	2695	BOUL	8	2202.5	2203	1.5	25.0	10.0		
	2800	OTTA	8	2202	2202.7	1	40.0			
	2695	BOUL	8	2210.5	2211	1.5	15.0	6.0		
	2800	OTTA	2	2210	2210.5	1	6.2	3.1		
	2800	OTTA	29	2211		7	2.0	1.0		
	2695	BOUL	3	2213.5	2214	2.5	3.0	1.0		
13	2695	CANR	8	0843	0844.5	2	15.0	6.0		
	2695	CRON	3	0844	0845.5	2	12.0	3.0		
	2695	MANI	3	0845	0845.8	3.1	16.3	4.8		
	2695	CANR	45	0857.5	0859	7	10.0	3.0		
	2695	CRON	3	0859	0901	3	8.0	3.0		
	2695	CANR	8	1244.5	1245.5	2.5	15.0	6.0		
	2695	SGMR	3	1245.4	1247.8	3.8	12.8	3.0		
	2695	CANR	3	1547.5	1548	1	6.0	2.0		
	2800	OTTA	1	1550	1550.5	2	5.0	2.2		
	2695	SGMR	2	1550	1550.5	1.6	7.0	2.5		
	2695	BOUL	3	1550	1551	2.5	7.0	2.0		
	2800	OTTA	21	1725	1745	200	2.4	1.8		
	2800	OTTA	20	1800	1820	50	3.8	1.9		
	2800	OTTA	1	1947.5	1949	5.5	5.6	1.4		
	2695	SGMR	1	1948.2	1949.1	7.9	4.4	2.2		
	2695	BOUL	45	1948.5	1949.5	6	5.0	2.0		
	8800	SGMR	1	1948.5	1950.7	7.4	4.9	2.4		
	2695	BOUL	3	2106.5	2107.5	1.5	7.0	2.0		
	2695	BOUL	4	2111.5	2113.5	2.5	30.0	12.0		
	2695	PENT	21	2120	2240	155	6.0	3.0		
	2695	BOUL	3	2214	2215	1.5	7.0	3.0		
	2695	BOUL	8	2218.5	2220	1.5	29.0	10.0		
	2695	BOUL	3	2229.5	2234	6.5	8.0	3.0		
	2695	PENT	1	2230	2233.5	7	5.2	2.4		
14	2695	CRON	45	0109	0111	6.5	6.0	2.0		
	2695	CANR	3	0925	0926	2	4.0	2.0		
	2695	MANI	1	0927.1	0927.7	5	7.0	2.0		
	2800	OTTA	2	1249.5	1250	1.5	4.6	1.6		
	2695	SGMR	1	1250	1250.3	1.1	7.2	3.4		
	2695	CANR	45	1345	1346.5	6.5	13.0	5.0		
	2800	OTTA	4	1345	1348.5	11	12.0	4.0		
	2695	SGMR	4	1356.1	1356.5	.8	14.1	5.8		
	2800	OTTA	21	1440	1505	310	7.8	3.9		
	2695	SGMR	20	1452	1508.8	54	6.1	3.0		
	8800	SGMR	20	1452.5	1536	52.5	10.4	5.2		
	2800	OTTA	22	1700	1705	10	1.6	0.8		
	2800	OTTA	21	1848	1854	45	1.6	0.8		
	2800	OTTA	1	1919.2	1920.2	7	4.4	1.5		
	8800	SGMR	4	1919.2	1920.2	6.6	36.5	9.1		
	2695	SGMR	1	1919.8	1920.3	3.8	2.6	1.0		
	2695	BOUL	45	1920	1920.5	2	7.0	2.0		
	2695	PENT	20	2315	2340	105	3.4	1.7		
15	2800	OTTA	2	1551.3	1551.7	.6	1.4	0.7		
	2800	OTTA	21	1625		105	2.0	1.4		
	2800	OTTA	1	1628	1630.3	4	1.2	0.6		
	2800	OTTA	21	2040	2255	260 D	14.8			
	2800	OTTA	40	2140		20	2.4			
	2695	BOUL	3	2144.5	2145	2	3.0	1.0		
	2695	BOUL	3	2150.5	2151	2	4.0	1.0		
16	2800	OTTA	21	1858	1945	85	4.0	1.9		
	2800	OTTA	1	1909.5	1910	7	1.6	0.8		
	2695	BOUL	45	1922.5	1924.5	6.5	5.0	2.0		
	2800	OTTA	1	1923.5	1925	6	6.0	3.0		
17	2800	OTTA	1	1620.5	1621.5	7.5	1.8	0.9		
	2800	OTTA	20	2030	2040	30	1.6	0.8		
	2800	OTTA	21	2105	2230	205	3.6	1.8		
	2800	OTTA	20	2110	2111	15	1.2	0.6		
18	2695	CRON	45	0545	0547.5	5.5	10.0	2.0		
	2695	CANR	3	0733.5	0734.5	2.5	5.0	2.0		
19	2800	OTTA	20	1340	1600	255	9.8	4.9		
20	2695	CANR	45	1111.5	1113	5.5	36.0	10.0		
	8800	SGMR	4	1113.6	1114.5	2.4	18.4	6.6		
	2695	SGMR	4	1113.5	1114.5	3.3	29.8	12.0		
21	2695	BOUL	3	1359.5	1400.5	2.5	4.0	1.0		
22	2695	CANR	3	1207.5	1209.5	4.5	4.0	1.0		
	2800	OTTA	21	1208	1215	13	2.2	1.1		
	2800	OTTA	1	1209	1209.7	2.5	1.6	0.8		
	2800	OTTA	26	1341		20	1.8			

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
MARCH 1973

MAR. 1973	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
	2800 OTTA	20	1435	1505	60	2.0	1.0		
	2800 OTTA	24	1540		30	1.8			
	2800 OTTA	20	1840	1855	30	1.8	1.2		
	2800 OTTA	1	2027.5	2027.6	.8	1.6	0.8		
	2800 OTTA	26	2040		10	1.4			
	2695 PENT	24	2225		40	2.8			
	2695 PENT	1	2328.4	2328.5	1	2.0	1.0		
23	2695 CANR	8	1004.5	1005	1.5	6.0	2.0		
	2800 OTTA	23	1330		175	1.8			
	2800 OTTA	1	1407	1407.3	.6	1.0	0.5		
	2800 OTTA	20	1740	1807	45	1.4	0.8		
	2800 OTTA	1	1919	1919.5	1	2.0	1.0		
	2800 OTTA	8	2043.8	2043.9	1.2	2.4			
	2695 SGMR	1	2043.8	2043.9	1.5	1.3	.5		
	2695 BOUL	8	2215.5	2216.5	2.5	7.0	2.0		
	2800 OTTA	1	2215	2215.8	2	6.6	3.3		
	2695 CRON	3	2310.5	2311.5	2.5	5.0	2.0		
	2695 PENT	1	2311.8	2312.1	3	6.0	2.0		
	8800 MANI	3	2311	2312.1	2.8	12.0	4.0		
	2695 MANI	3	2311.2	2312.2	4.1	13.8	6.4		
	2695 BOUL	8	2312	2313	1.5	9.0	4.0		
24	8800 MANI	4	0456.6	0459.7	7.4	53.0	19.1		
	2695 MANI	40	0456.6	0457.2	4.5	42.6	9.0		
	2695 CRON	45	0457	0458	4	29.0	7.0		
	8800 MANI	4	0553.7	0554.1	.9	31.8	8.5		
	2695 MANI	1	0553.7	0554.3	.9	6.7	2.2		
	8800 MANI	4	0612.9	0614.2	2.4	17.0	4.2		
	2695 MANI	2	0613.1	0614.1	2.1	.6.7	2.2		
	2695 CRON	3	0613	0613.5	1.5	5.0	2.0		
	2695 MANI	1	0638	0640.2	5.5	2.2	1.1		
	8800 MANI	3	0848.2	0848.8	1.9	21.2	2.1		
	2695 MANI	1	0848.2	0848.7	1.9	3.4	1.1		
	2695 CANR	45	1156	1156.5	2	8.0	2.0		
	2695 SGMR	2	1156.8	1157.1	2.4	4.2	1.5		
	8800 SGMR	4	1157	1157.2	2.5	39.8	9.0		
	2800 OTTA	20	1220	1250	220	2.6	1.3		
	8800 SGMR	1	1900.5	1900.7	1.8	6.9	3.4		
	2695 SGMR	1	1900.4	1900.7	1.8	6.0	3.0		
	2800 OTTA	1	1900.2	1900.5	1	6.8	2.3		
	2800 OTTA	21	2220	2225	30	1.8	0.9		
	2800 OTTA	1	2224.5	2225	1	1.4	0.7		
	8800 MANI	40	2225.8	2227.3U	19	680.0U	193.0U		
	2695 MANI	22	2228	2237	14.4	10.2	2.3		
25	2695 PENT	1	0032	0033	4	1.6	0.8		
	2695 PENT	3	0039.2	0041.8	7	114.0	24.0		
	8800 MANI	4	0039	0042.1	9.6	360.0	52.0		
	2695 CRON	8	0039.5	0042	7.5	90.0	29.0		
	2695 MANI	4	0040.3	0041.9	7.5	100.0	17.0		
	8800 MANI	4	0456.2	0458	4.6	196.0	32.3		
	2695 MANI	4	0456	0458.1	7.4	45.9	9.0		
	2695 CRON	45	0456	0458.5	5	27.0	8.0		
	2695 CRON	45	0913.5	0915.5	5	33.0	6.0		
	2695 CANR	45	0913	0915	5.5	24.0	8.0		
	8800 MANI	4	0914.2	0915.5	4.8	87.0	20.6		
	2695 MANI	4	0914.2	0916	4.3	20.2	3.4		
	2695 CANR	3	1500	1501	3	2.0	1.0		
	2695 BOUL	3	1615	1618	5.5	4.0	1.0		
	2695 CANR	3	1616	1618	2.5	3.0	1.0		
	2800 OTTA	1	1616	1617.8	4	2.0	1.0		
	2695 SGMR	1	1617	1617.8	2	3.6	.9		
	2695 PENT	2	2356	2358.5	4.5	3.6	1.8		
	2695 CRON	45	2357	2359	2.5	4.0	1.0		
26	2800 OTTA	21	1900	2007	260	7.8	3.0		
	2800 OTTA	21	1917	1921	10	1.6	0.8		
	2695 SGMR	2	1917	1919.3	9.6	8.2	2.1		
	2800 OTTA	2	1918	1919	3.5	5.4	2.0		
	8800 SGMR	4	1918.8	1919.3	4	16.7	4.2		
	2695 BOUL	3	1918.5	1919.5	5	7.0	2.0		
27	2695 CANR	8	0920	0922	3.5	17.0	5.0		
	2695 CRON	8	0921.5	0922	1	14.0	5 .0		
	2695 CANR	3	1441.5	1443	4	6.0	2.0		
	2800 OTTA	1	1442.8	1444	3	3.4	1.6		
	2695 SGMR	1	1443	1443.8	2.7	4.4	2.2		
	2695 BOUL	3	1443.5	1444	2	4.0	2.0		
	2800 OTTA	20	1640	1715	70	1.6	0.8		
	2800 OTTA	2	2125.8	2126	2	7.6	2.6		
	2695 BOUL	45	2126	2126.5	2.5	16.0	6.0		
	2695 PENT	24	2240		70	2.7			
28	8800 MANI	1	0103.8	0105	5.2	5.9	2.0		
	2695 MANI	4	0103.8	0104.9	5.7	13.9	3.5		
	2695 CRON	45	0104	0105	3.5	10.0	3.0		
	2695 PENT	45	0104	0104.9	4	12.4	4.2		
	2800 OTTA	1	1451.8	1452	1	1.8	0.9		
	2800 OTTA	21	1740	1850	235	4.8	2.6		

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
MARCH 1973

MAR. 1973	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
	2800 OTTA	1	1755.8	1756	.8	3.0	1.0		
29	2800 OTTA	24	2100		100	4.0			
	2695 PENT	20	2250	2255	10	3.4	1.7		
	2695 BOUL	3	2251.5	2255	7.5	4.0	2.0		
30	2695 PENT	1	0013	0013.5	2	1.0	0.5		
	2695 CRON	8	0710.5	0711.5	2	10.0	3.0		
	8800 MANI	3	0711.3	0712.3	4.3	20.3	4.5		
	2695 MANI	1	0711.8	0712.4	2	5.4	1.1		
	2695 MANI	1	0745.4	0745.7	1.3	4.3	1.1		
	2695 MANI	1	0852.7	0853	2.1	3.2	1.1		
	2800 OTTA	40	1140	1141	7	3.6			
	2695 SGMR	45	1142.6	1144.8	4.2	3.6	1.0		
	2695 SGMR	45		1145.9		4.5			
	2695 CANR	45	1142.5	1146	4	4.0	2.0		
	8800 SGMR	45	1143.8	1143.9	3.8	5.1	2.0		
	8800 SGMR	45		1145.9		10.2			
	2800 OTTA	1	1223	1223.5	1.1	1.8	0.6		
	2695 CANR	3	1223	1223.5	1.5	3.0	1.0		
	2695 SGMR	1	1223.4	1223.8	2.1	2.9	1.0		
	2800 OTTA	21	1320	1335	45	2.8	1.4		
	2800 OTTA	40	1323.7	1324.8	2	3.2			
	2800 OTTA	1	1331	1332.1	2	3.2	1.1		
	2800 OTTA	21	1420	1553	170	4.8	2.4		
	2695 CANR	8	1430.5	1431.5	2	4.0	1.0		
	2695 CANR	45	1526	1529.5	4	31.0	10.0		
	2800 OTTA	46	1527	1529.8	4	19.0	4.8		
	2695 SGMR	4	1527.1	1529.8	3.8	24.3	6.0		
	2695 BOUL	45	1527.5	1530.5	3.5	30.0	7.0		
	8800 SGMR	2	1528.5	1528.6	2.4	4.1	1.5		
	2800 OTTA	1	1613.9	1614	1.5	1.6	0.8		
	2800 OTTA	1	1656	1656.3	1	.8	0.4		
	2800 OTTA	1	1807	1807.3	1	2.6	1.0		
	2695 BOUL	8	1807.5	1808	1	4.0	1.0		
	2800 OTTA	1	1845	1845.5	1	1.2	0.6		
	2800 OTTA	24	2200		5	1.0			
	2800 OTTA	2	2244.7	2244.9	1	1.2	0.6		
	2695 BOUL	8	2245	2245	1	4.0	1.0		
31	2695 MANI	2	0223.5	0225.5	4.6	3.4	1.1		
	8800 MANI	1	0511.3	0511.6	2.2	8.8	4.4		
	2695 MANI	1	0511.3	0511.6	2.7	4.5	1.1		
	8800 MANI	4	0648.4	0648.7	3.1	15.5	4.4		
	2695 MANI	1	0648.4	0648.8	3.1	2.2	1.1		
	2695 CANR	3	0905.5	0907.5	4	4.0	1.0		
	2800 OTTA	1	1207.5	1208	1.5	1.8	0.9		
	2800 OTTA	24	1320		30	1.8			
	2800 OTTA	21	1620	1635	25	1.4	0.7		
	2800 OTTA	1	1635	1635.5	2	.7	0.3		
	2800 OTTA	1	1949.5	1950.5	2	1.4	0.7		
	2800 OTTA	32	2227	2235	20 D	2.2			
	2695 PENT	32	2232	2238	20	1.8	0.9		

Observatories:

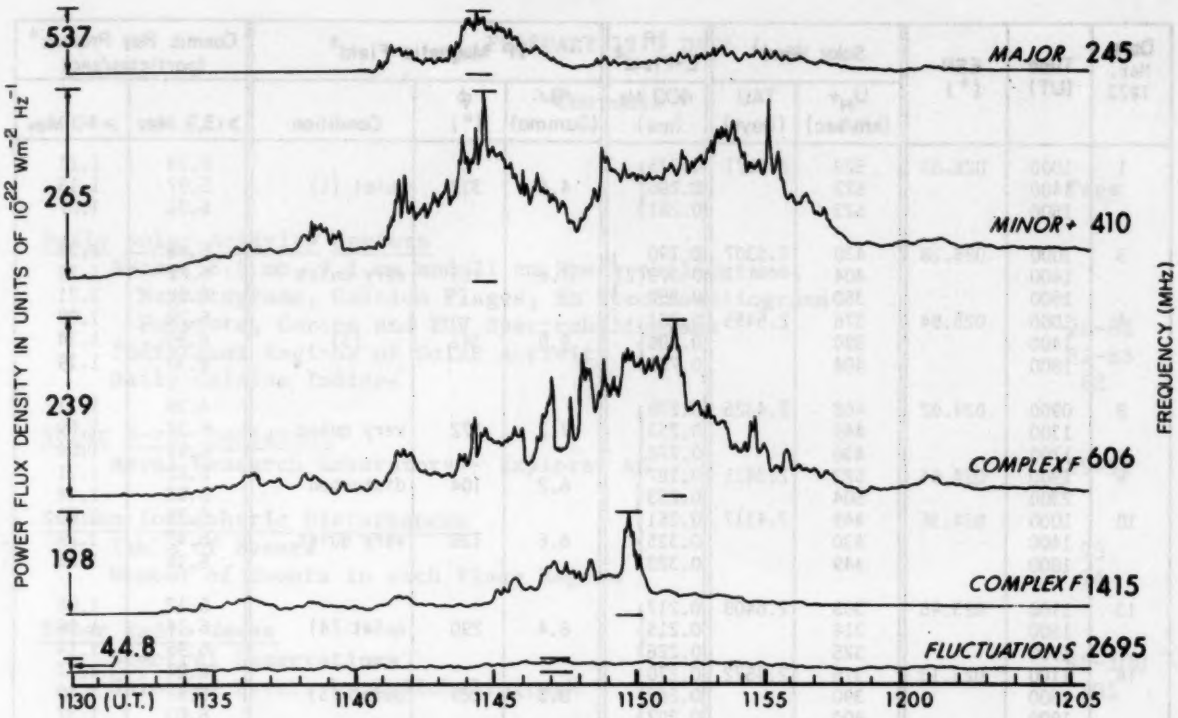
BOUL = Boulder CRON = Carnarvon OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill
CANR = Canary Islands MANI = Manila

Explanation of Type Code:

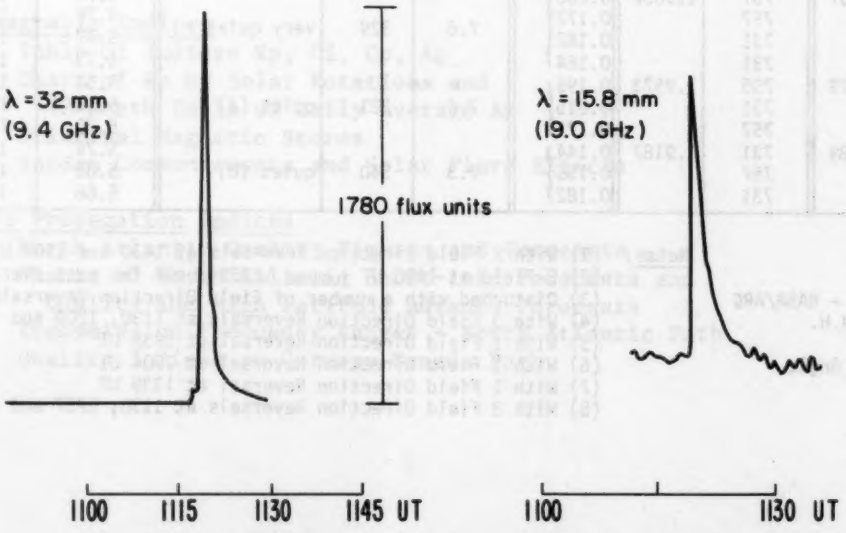
1 Simple 1 6 Minor 22 Simple 3F 27 Rise and Fall 32 Absorption 44 Noise storm in Progress
2 Simple 1F 7 Minor + 23 Simple 3AF 28 Precursor 40 Fluctuation 45 Complex
3 Simple 2 8 Spike 24 Rise 29 Post Burst Increase 41 Group of Bursts 46 Complex F
4 Simple 2F 20 Simple 3 25 Rise A 30 Post Burst Increase A 42 Series of Bursts 47 Great Burst
5 Simple 21 Simple 3A 26 Fall 31 Post Burst Decrease 43 Onset of Noise Storm 48 Major
49 Major +

SELECTED SOLAR NOISE BURSTS

MARCH 1973



RADIO BURST OBSERVED ON 12 MARCH, 1973 SAGAMORE HILL RADIO OBSERVATORY
HAMILTON, MASS.



RADIO BURST OBSERVED ON 1 MARCH, 1973 AT SLOUGH, U.K.

PIONEER IX

MARCH 1973

Date Mar. 1973	Time (UT)	ESP (°)	Solar Wind[1]		IP E-Field[2]	IP Magnetic Field[3]			Cosmic Ray Protons[4] (particles/sec)	
			U_H+ (km/sec)	TAU (Days)	400 Hz (mv)	/B/ (Gamma)	ϕ (°)	Condition	>13.9 Mev	>40 Mev
1	1000	026.63	523	2.4171	0.275				6.24	1.21
	1400		523		0.286	4.4	302	quiet (1)	5.97	1.13
	1800		523		0.281				6.01	1.07
3	1000	026.18	430	2.5307	0.190				6.46	1.38
	1400		404		0.379(2)	7.6	155	very quiet	6.26	1.29
	1800		350		0.250				6.38	1.21
4	1000	025.94	376	2.5455	0.231				6.20	1.09
	1400		390		0.286	9.0	341	(3)	6.50	1.34
	1800		404		0.231				6.30	1.19
8	0900	024.92	468	2.4325	0.276				6.36	1.31
	1300		449		0.253	7.7	172	very quiet	6.37	1.09
	1700		430		0.278				6.51	1.04
9	1900	024.64	523	2.3411	0.187	6.2	104	disturbed	6.02	1.21
	2300		504		0.233				6.03	1.14
10	1000	024.36	449	2.4117	0.261				5.78	1.23
	1400		430		0.315	6.6	136	very quiet	6.45	1.29
	1800		449		0.323				6.18	1.23
13	1100	023.45	303	2.6408	0.217				6.12	1.06
	1500		314		0.215	6.4	290	quiet (4)	6.14	1.09
	1900		325		0.226				5.96	1.14
14	1100	023.13	376	2.4572	0.270				6.01	1.17
	1500		390		0.267	8.3	289	quiet (5)	5.97	1.40
	1900		404		0.207				6.03	1.37
15	1100	022.81	376	2.4993	0.239				5.62	1.26
	1500		363		0.234	8.8	339	quiet (6)	5.71	1.14
	1900		363		0.234				5.74	1.31
21	1100	020.67	757	1.9652	0.203				5.74	1.16
	1500		757		0.172	7.6	329	very quiet	5.70	1.29
	1900		731		0.182				5.77	1.06
	2300		731		0.164				5.73	1.14
22	1100	020.29	705	1.9573	0.195				5.54	1.26
	1500		731		0.215	7.4	321	quiet (7)	6.10	1.37
	1900		757		0.171				5.70	1.23
23	1100	019.89	731	1.9187	0.144				5.79	1.31
	1500		757		0.155	7.3	340	quiet (8)	5.85	1.11
	1900		731		0.182				5.66	1.00

[1] Wolfe - NASA/ARC
[2] Scarfe - TRW, Inc.
[3] Sonett and Colburn - NASA/ARC
[4] Webber - Univ. of N.H.

ESP = Earth-Sun Probe Angle.

Notes:
(1) With 2 Field Direction Reversals at 1430 and 1500 UT
(2) E-Field at 1400 UT jumped ~200% above the pass average
(3) Disturbed with a number of Field Direction Reversals
(4) With 3 Field Direction Reversals at 1130, 1200 and 1230 UT
(5) With 1 Field Direction Reversal at 1838 UT
(6) With 1 Field Direction Reversal at 1004 UT
(7) With 1 Field Direction Reversal at 1335 UT
(8) With 3 Field Direction Reversals at 1130, 1737 and 1830 UT

FEBRUARY 1973 DATA

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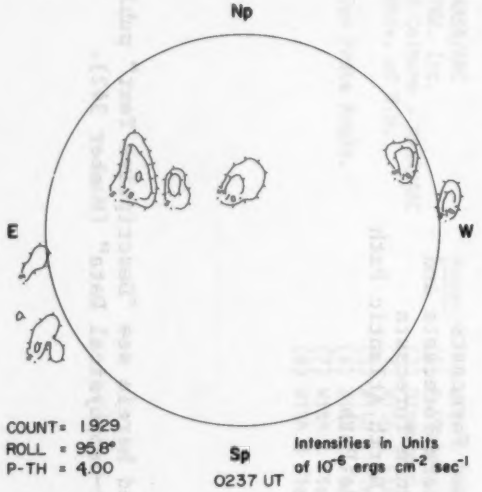
For explanations of the data contained herein see "Descriptive Text" published as supplement to February 1973 "Solar-Geophysical Data" (Number 342).

FEBRUARY 1, 1973 (P=-12.17, B_o=-6.05, L_o=153.12)

26 Feb 73

NASA GSFC
OSO-7

X-RAY



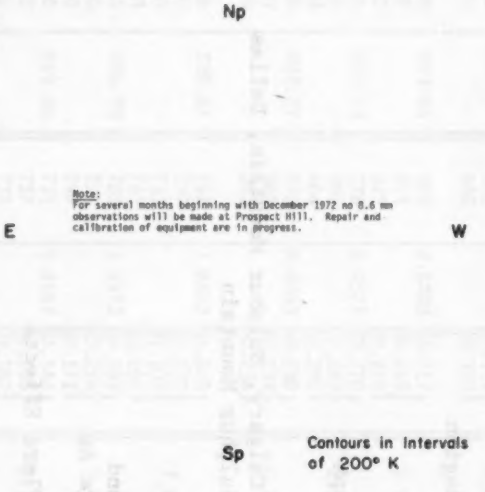
COUNT= 1929
ROLL = 95.8°
P-TH = 4.00

0237 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL

8.6 mm

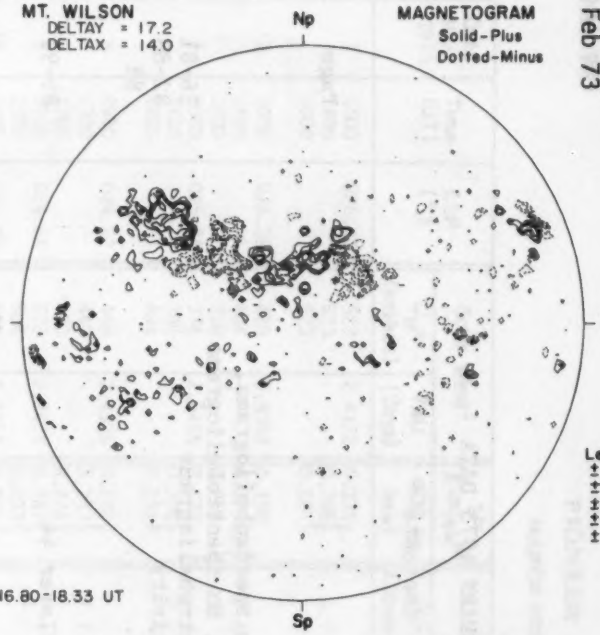


Note:
For several months beginning with December 1972 no 8.6 mm observations will be made at Prospect Hill. Repair and calibration of equipment are in progress.

Contours in Intervals of 200° K

MT. WILSON
DELTAY = 17.2
DELTAX = 14.0

MAGNETOGRAM
Solid-Plus
Dotted-Minus

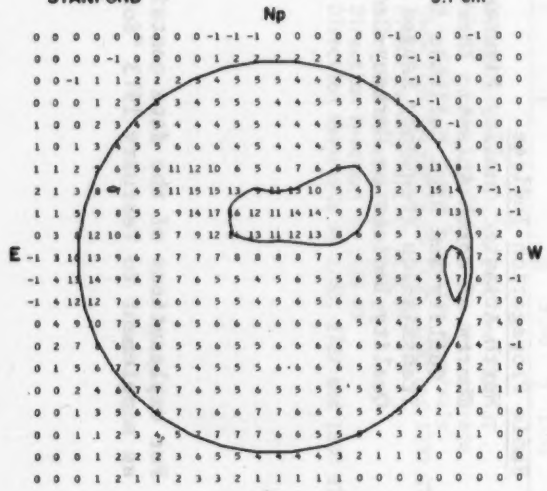


Levels
±5
±10
±20
±40
±80

16.80-18.33 UT

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

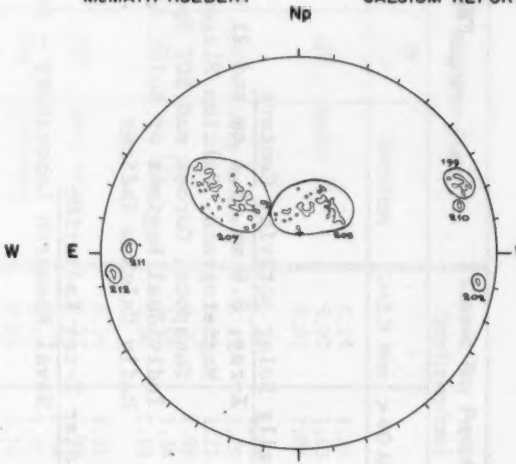
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



POOR	M
05-2000	-3.0
07-2400	-3.0
12-0800	-2.5

1525 UT

20-21 UT

02-03 UT Brightness Unit 1,700° K

1525 UT

BOULDER
01

Np

Hα

E

W

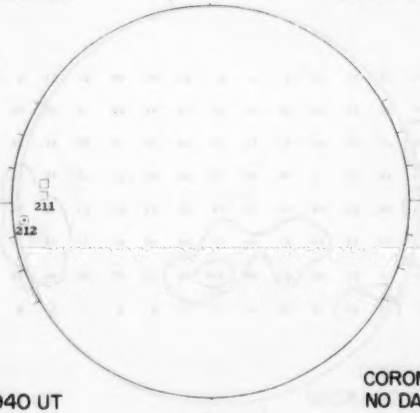
1610 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1940 UT

Sp

CORONA
NO DATA

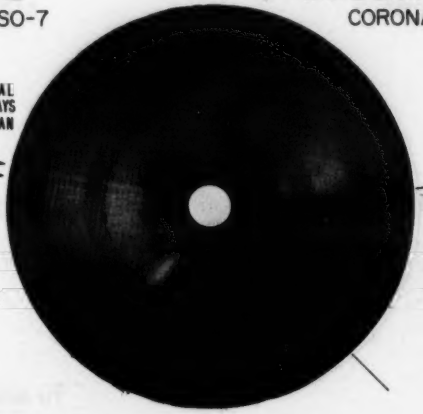
NRL
OSO-7

Np

TV SCAN DIRECTION

WHITE-LIGHT
CORONA

TWO DIAMETRAL STREAKS, ALWAYS AT 90° TO SCAN DIRECTION



E

W

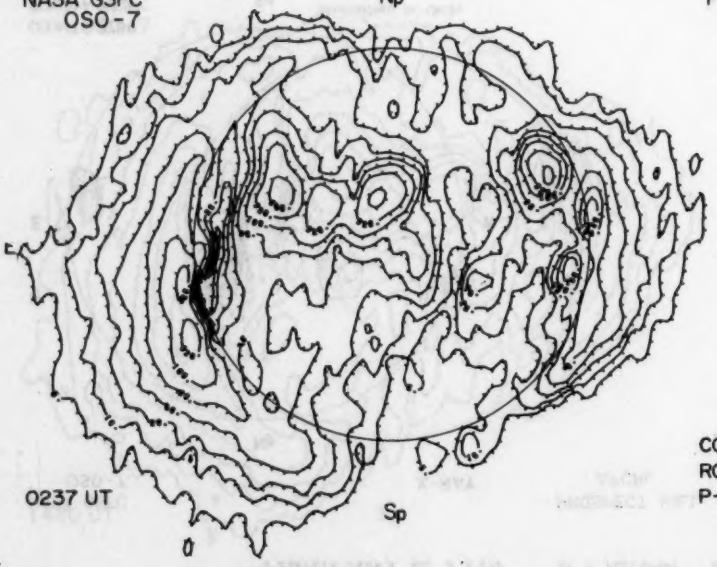
SHADOW AREA CAUSED BY OCCULTER SUPPORT

1136 UT

Sp

NASA GSFC
OSO-7

Np



W

0237 UT

Sp

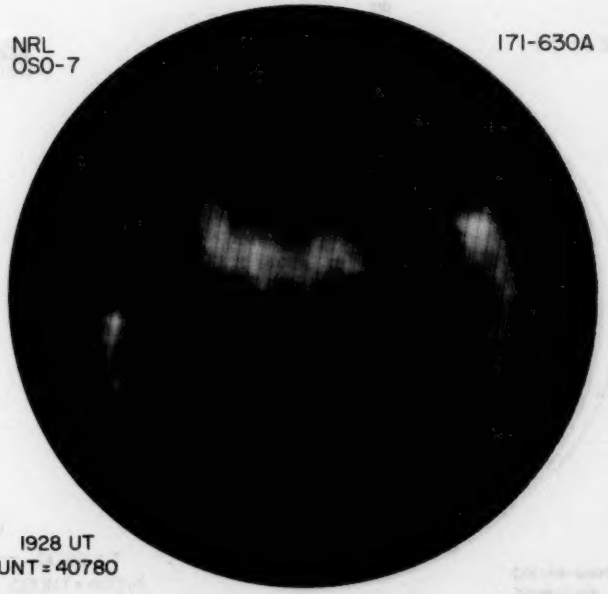
FE XV
284A

COUNT = 76590
ROLL = 95.8°
P-TH = 4.00

NRL
OSO-7

Np

171-630A



E

W

1928 UT
COUNT = 40780

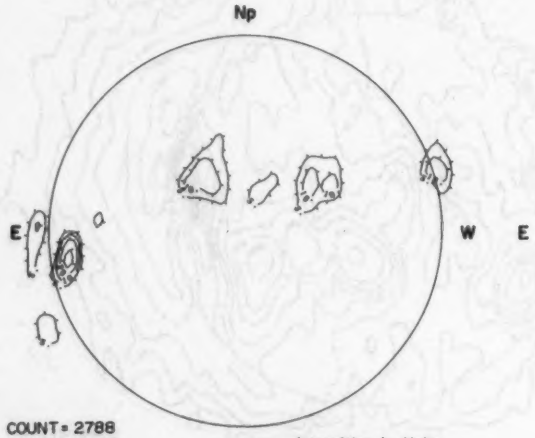
Sp

27 Feb 73

FEBRUARY 2, 1973 (P=12.58, B_o=-6.12, L_o=139.96)

28 Feb 73

NASA GSFC OSO-7 — X-RAY

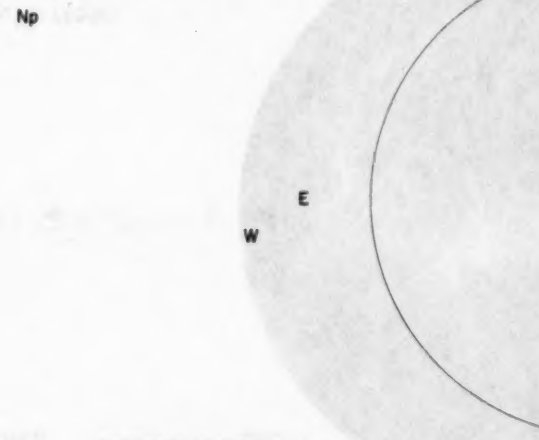


COUNT = 2788
ROLL = 94.5°
P-TH = 3.90

1420 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

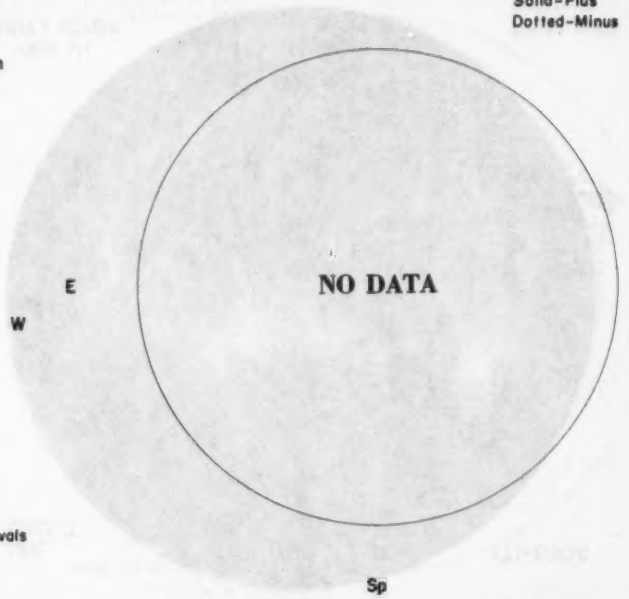
PROSPECT HILL AFCRL — 8.6 mm



Contours in Intervals of 200° K

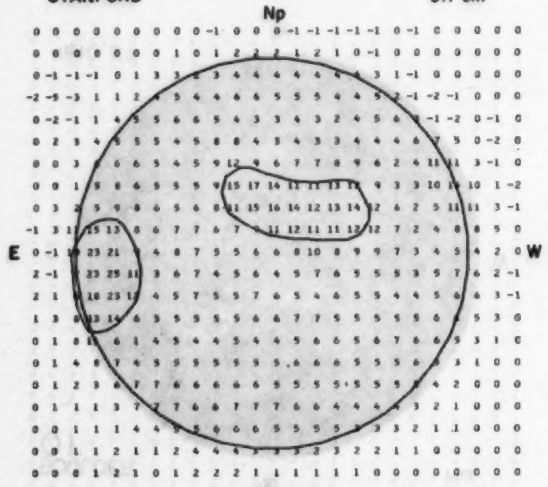
MT. WILSON — MAGNETOGRAM

Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

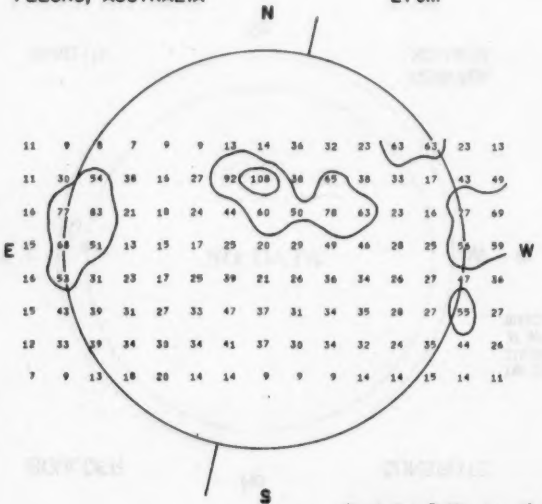
STANFORD — 9.1 cm



20-21 UT

Brightness Unit 5,000° K

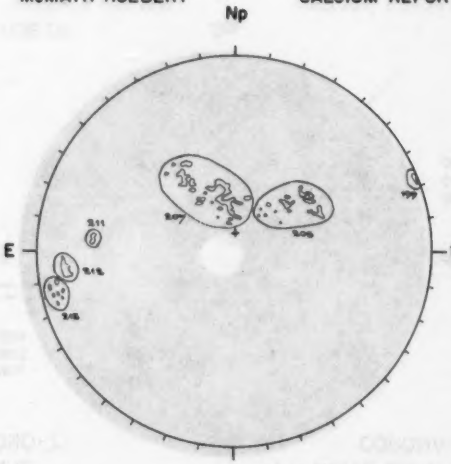
FLEURS, AUSTRALIA — 21 cm



02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT — CALCIUM REPORT



BAD	M
05 - 1600 - 2.5	
07 - 2400 - 2.5	
12 - 0800 - 3.5	

1610 UT

20-21 UT

02-03 UT

Brightness Unit 1,700° K

1610 UT

BOULDER
02

Np

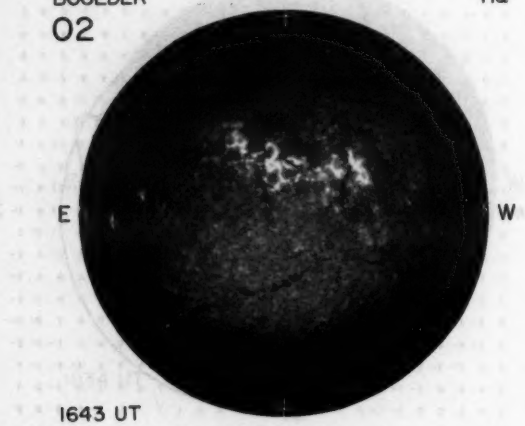
Hα

E

W

1643 UT

Sp



BOULDER

Np

SUNSPOTS

E

W

211

212

1630 UT

CORONA
SACRAMENTO PEAK

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

W

0908 UT

Sp

NASA GSFC
OSO-7

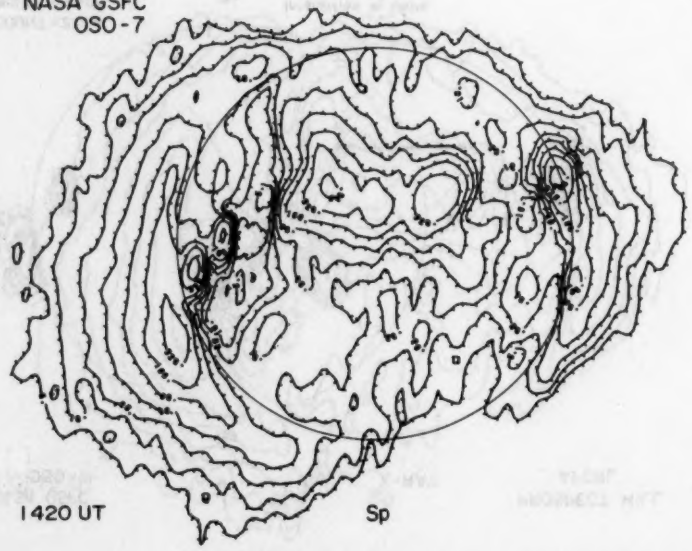
Np

E

W

1420 UT

Sp



FE XV
284A

COUNT = 74108
ROLL = 94.6°
P-TH = 3.90

NRL
OSO-7

Np

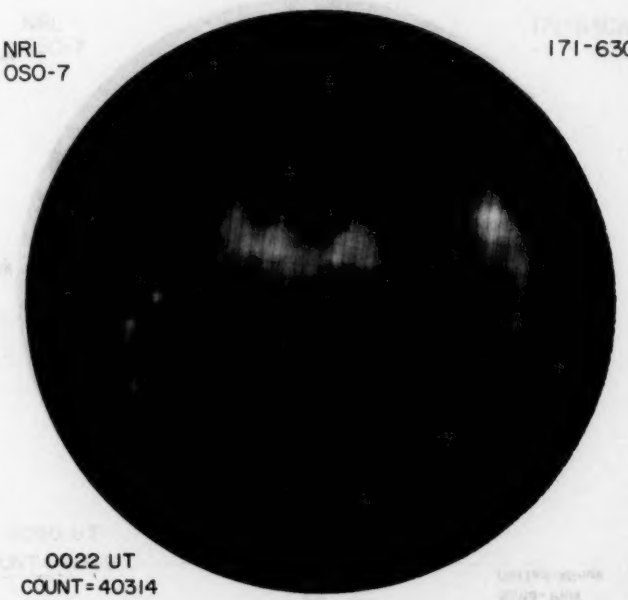
171-630A

E

W

0022 UT
COUNT = 40314

Sp

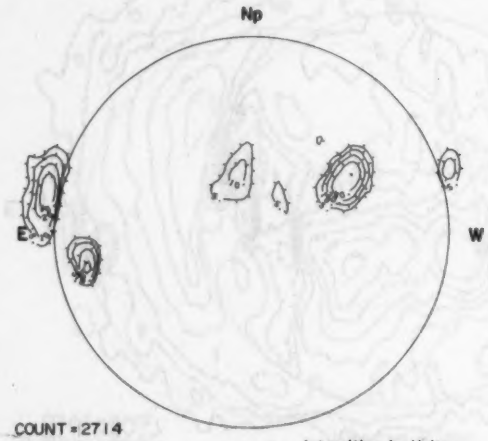


29
Feb 73

FEBRUARY 3, 1973 (P=-12.98, B_o=-6.19, L_o=126.79)

NASA GSFC
OSO-7

X-RAY



COUNT = 2714
ROLL = 93.2°
P-TH = 3.70

0211 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

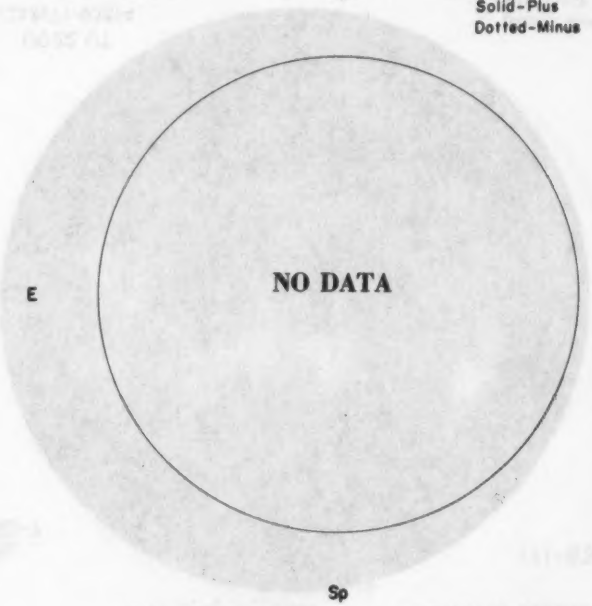
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

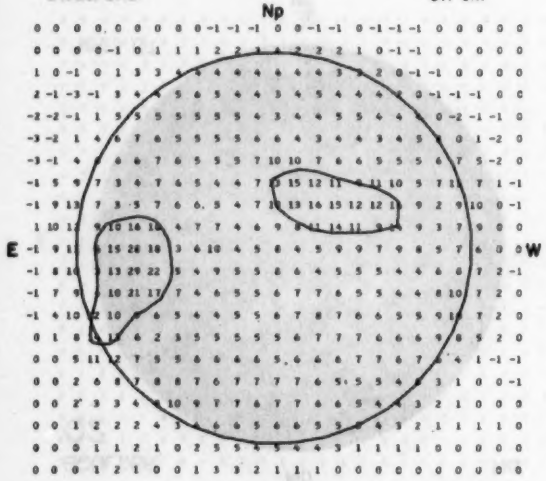
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

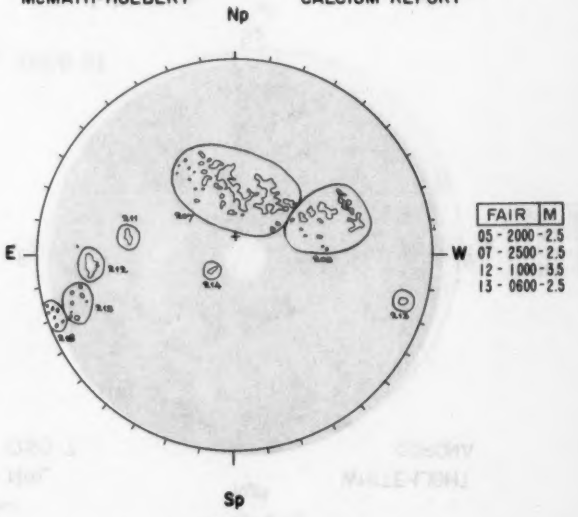
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



1545 UT

20-21 UT

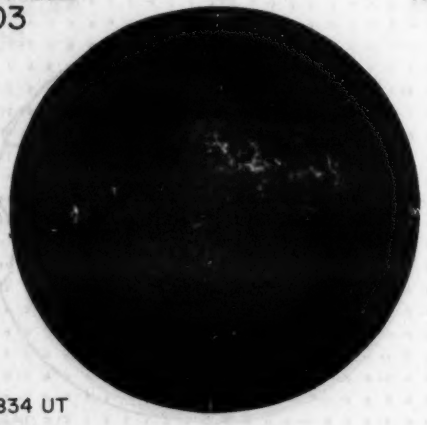
02-03 UT Brightness Unit 1,700° K

1545 UT

BOULDER
03

Np

Hα



E

W

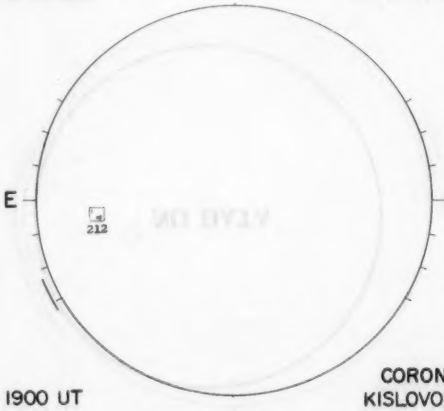
1834 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1900 UT

CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE - LIGHT
CORONA

E

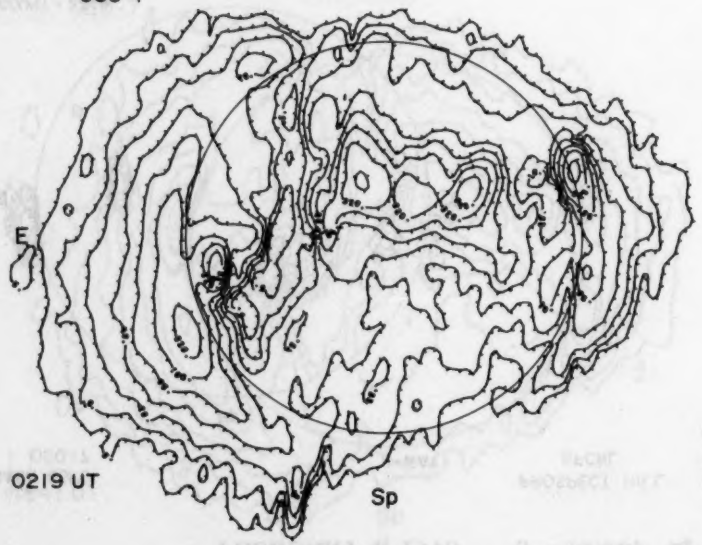
W

1141 UT

Sp

NASA GSFC
OSO-7

Np



E

0219 UT

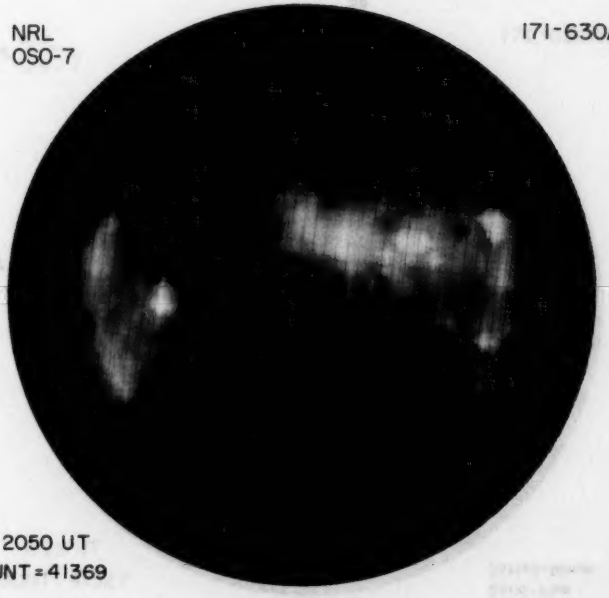
Sp

FE XV
284A

NRL
OSO-7

171-630A

Np



W

E

W

COUNT = 75268
ROLL = 93.2°
P-TH = 3.70

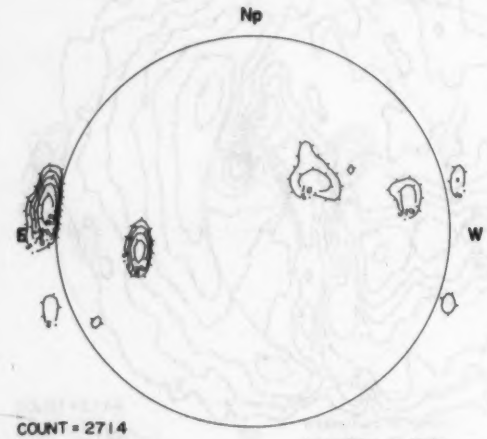
2050 UT
COUNT = 41369

Sp

31
Feb 73

FEBRUARY 4, 1973 (P=-13.38, B_o=-6.25, L_o=113.63)

NASA GSFC
OSO-7
X-RAY

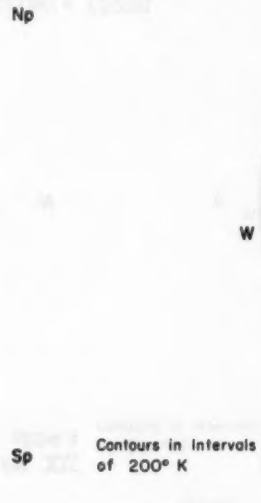


COUNT = 2714
ROLL = 91.4°
P-TH = 3.65

1549 UT

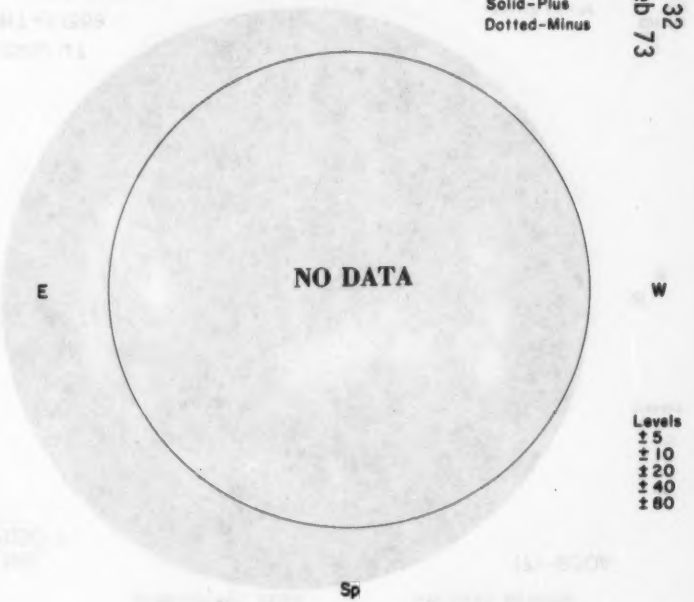
Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL
8.6 mm



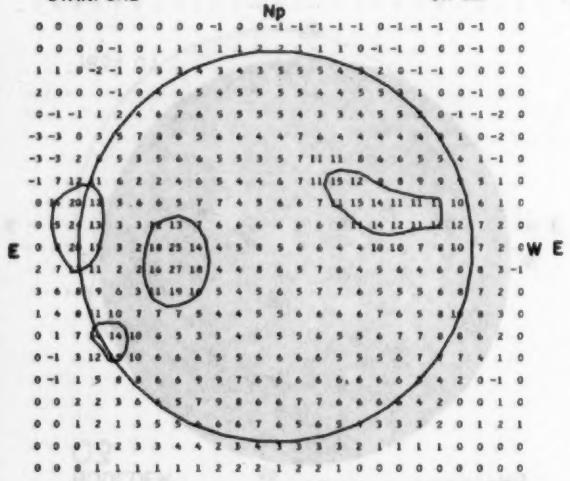
Contours in Intervals of 200° K

MT. WILSON
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD
9.1 cm



20-21 UT

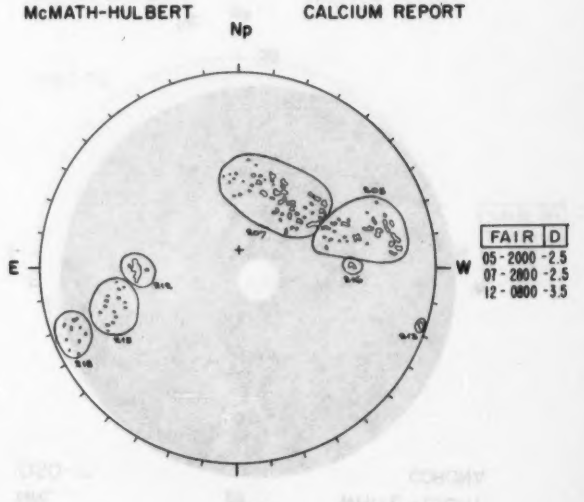
Brightness Unit 5,000° K

FLEURS, AUSTRALIA
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT
CALCIUM REPORT



FAIR	D
05 - 2000	-2.5
07 - 2800	-2.5
12 - 0800	-3.5

1750 UT

20-21 UT

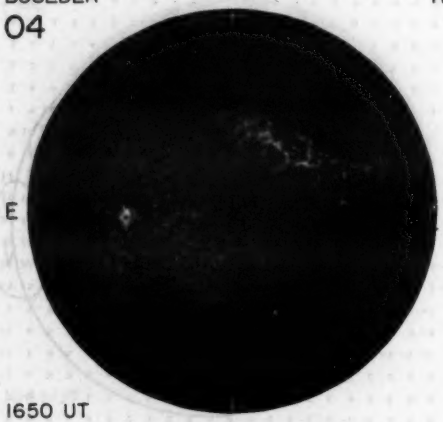
02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

1750 UT

BOULDER
04

Np

Hα



E

W

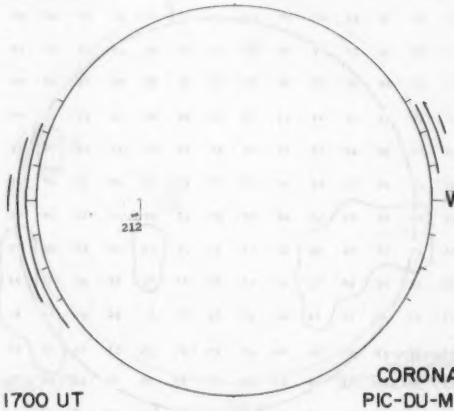
1650 UT

Sp

BOULDER

Np

SUNSPOTS



W

212

1700 UT

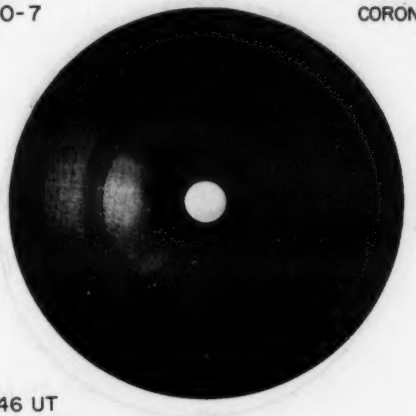
Sp

CORONA
PIC-DU-MIDI

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



E

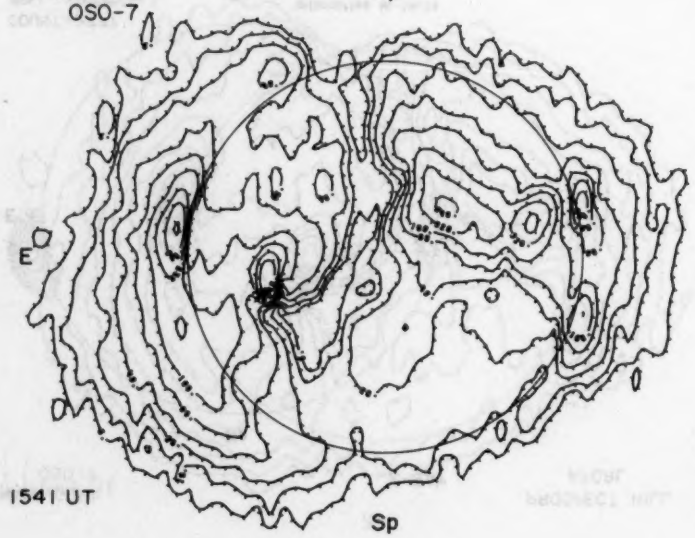
W

1046 UT

Sp

NASA GSFC
OSO-7

Np



E

W

1541 UT

Sp

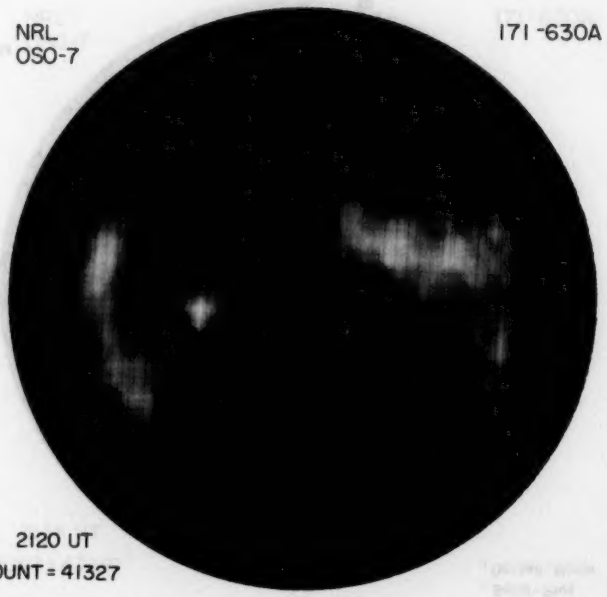
FE XV
284A

COUNT = 80992
ROLL = 91.4°
P-TH = 3.65

Np

NRL
OSO-7

171-630A



E

W

2120 UT
COUNT = 41327

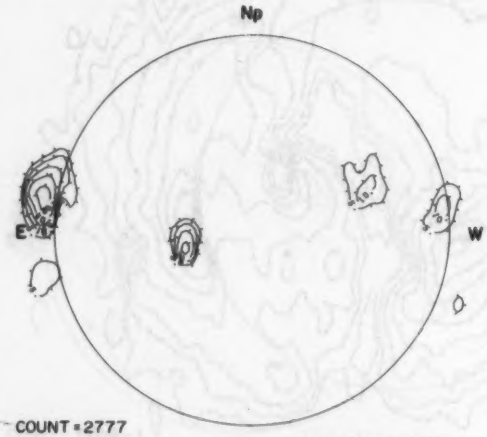
Sp

33
Feb 73

FEBRUARY 5, 1973 (P=-13.77, B_o=-6.32, L_o=100.46)

NASA GSFC
OSO-7

X-RAY



COUNT = 2777
ROLL = 90.5°
P-TH = 3.60

1616 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

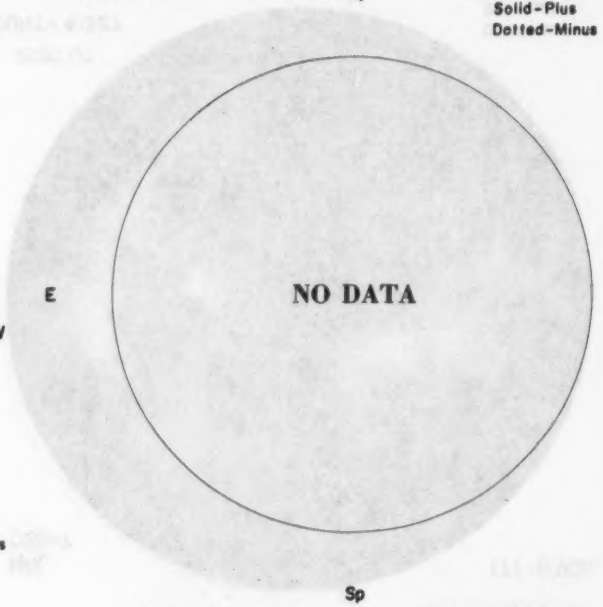
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

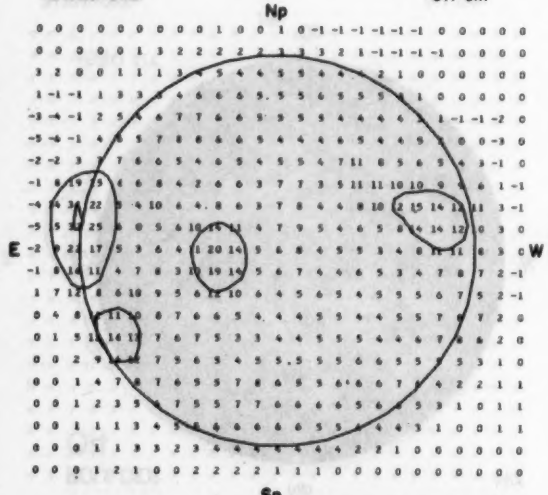
MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm

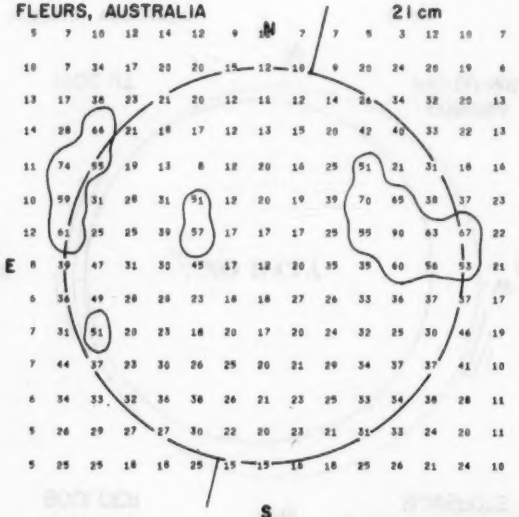


20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

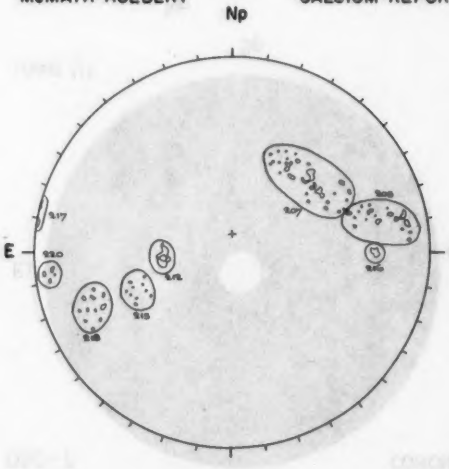


02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



POOR	M
07 - 2400	2.5
12 - 1000	3.5
16 - 0500	2.5
17 - 1500	2.5

1445 UT

20-21 UT

02-03 UT Brightness Unit 1,700° K

1445 UT

BOULDER
05

Np

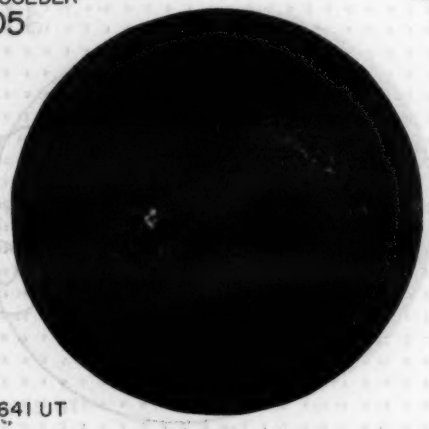
Hα

E

W

1641 UT

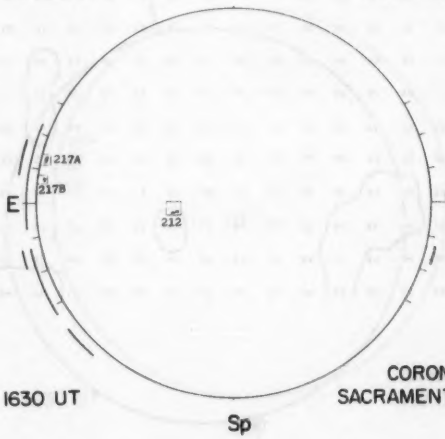
Sp



BOULDER

Np

SUNSPOTS



E

W

1630 UT

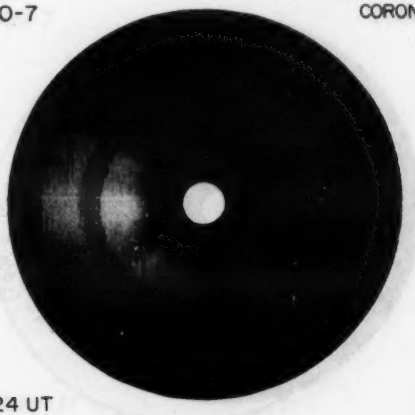
Sp

CORONA
SACRAMENTO PEAK

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



E

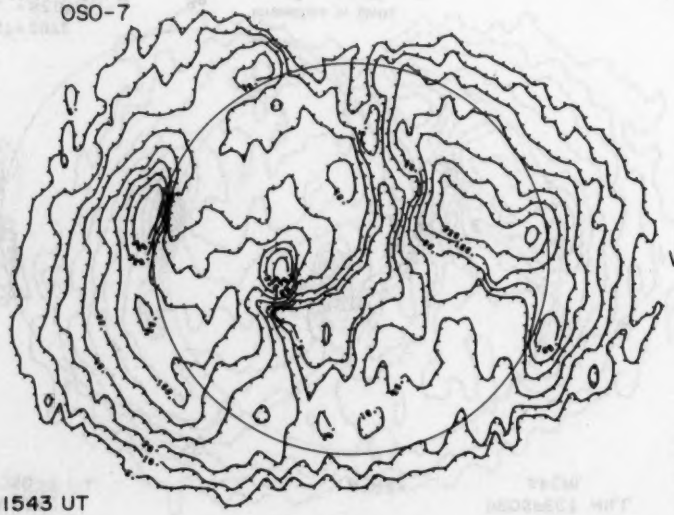
W

1124 UT

Sp

NASA GSFC
OSO-7

Np



E

W

1543 UT

Sp

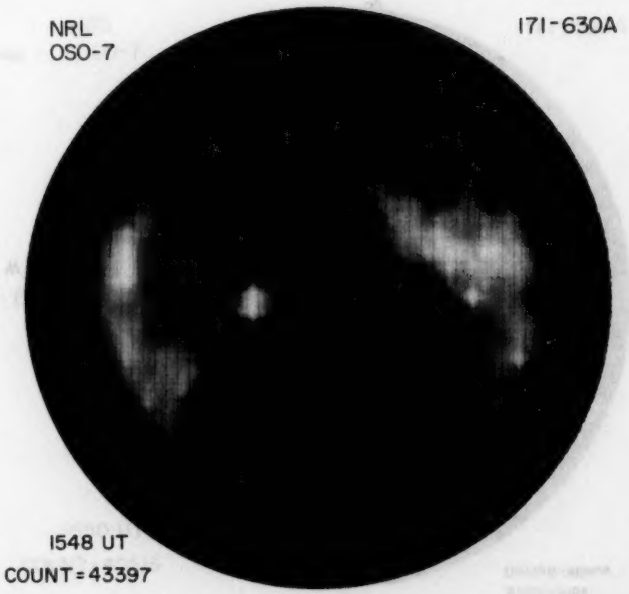
FE XV
284A

COUNT = 80587
ROLL = 90.5°
P-TH = 3.60

Np

NRL
OSO-7

171-630A



E

W

1548 UT

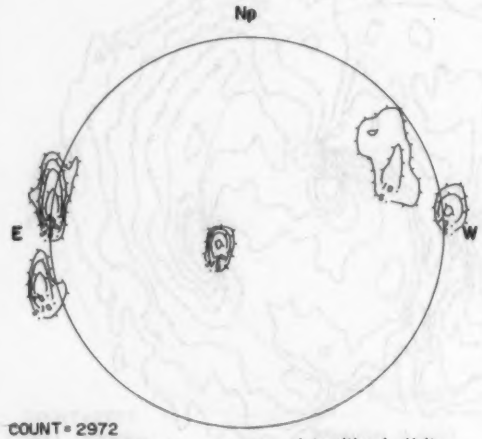
COUNT = 43397

Sp

35
Feb 73

FEBRUARY 6, 1973 (P=-14.16, B_o=-6.38, L_o= 87.29)

NASA GSFC
OSO-7
X-RAY



COUNT = 2972
ROLL = 87.0°
P-TH = 3.40

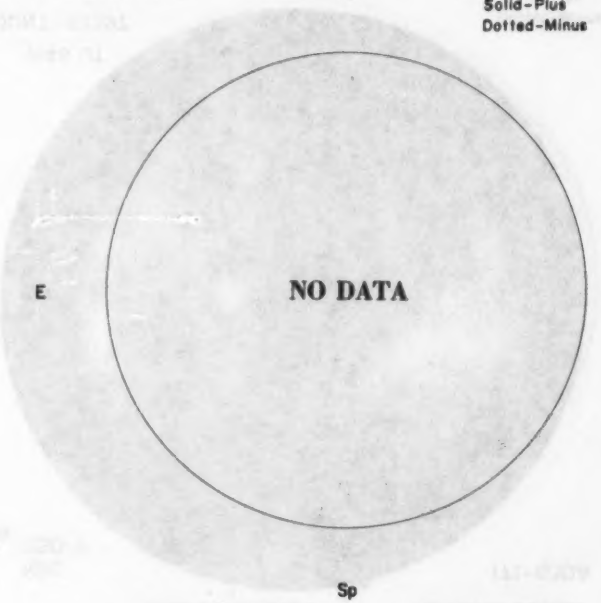
1158 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL
8.6 mm

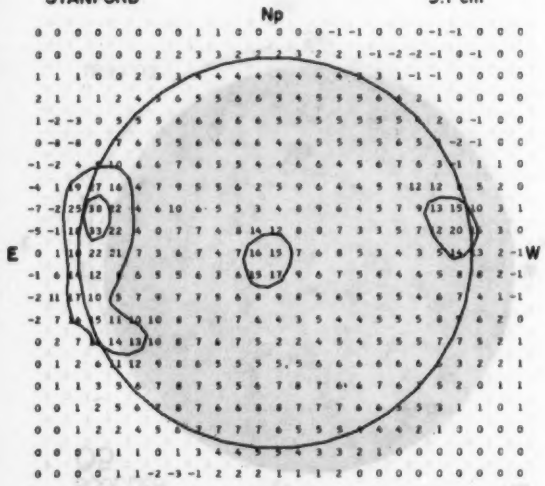
Contours in Intervals of 200° K

MT. WILSON
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

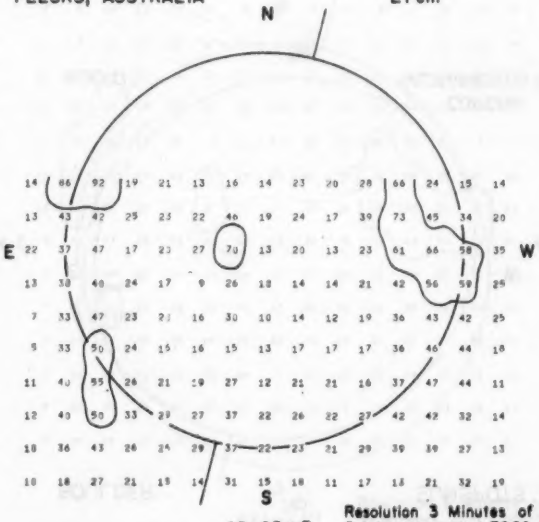
STANFORD
9.1 cm



20-21 UT

Brightness Unit 5,000° K

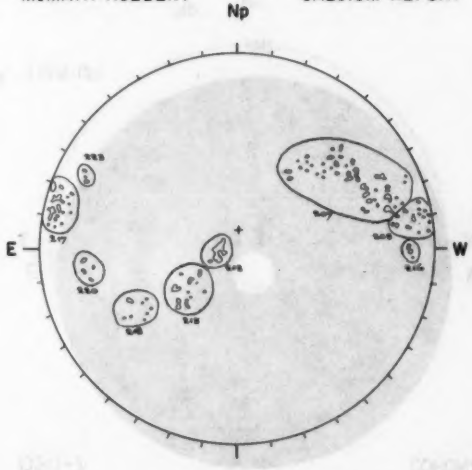
FLEURS, AUSTRALIA
21 cm



02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT
CALCIUM REPORT



FAIR	M
07 - 2600	2.5
12 - 0800	3.5
17 - 2200	2.5

1750 UT

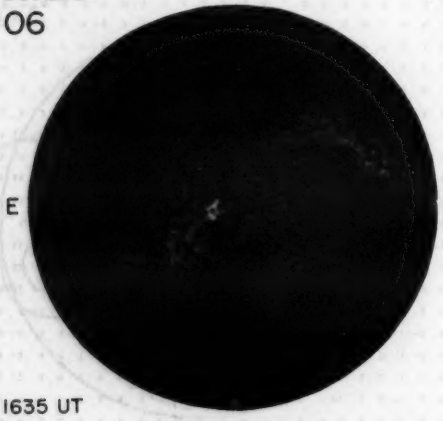
BOULDER
Np
Hα

BOULDER
Np
SUNSPOTS

NRL
Np
WHITE-LIGHT

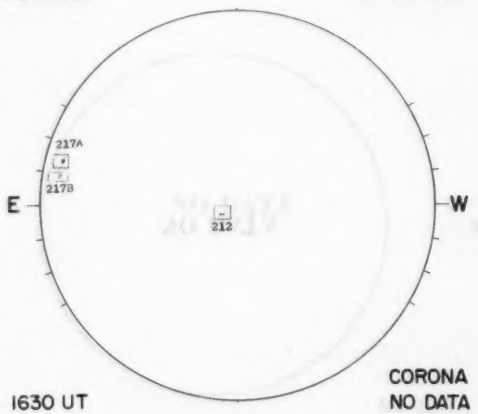
20-21 UT 02-03 UT Brightness Unit 1,700° K 1750 UT

BOULDER
06



1635 UT

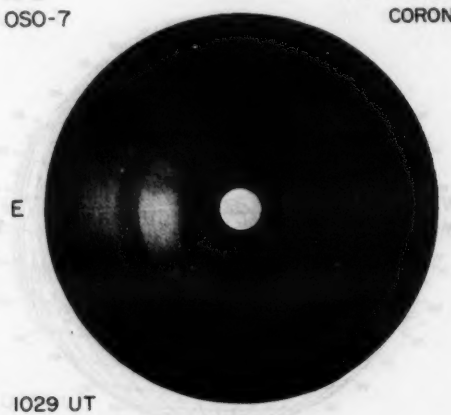
BOULDER



1630 UT

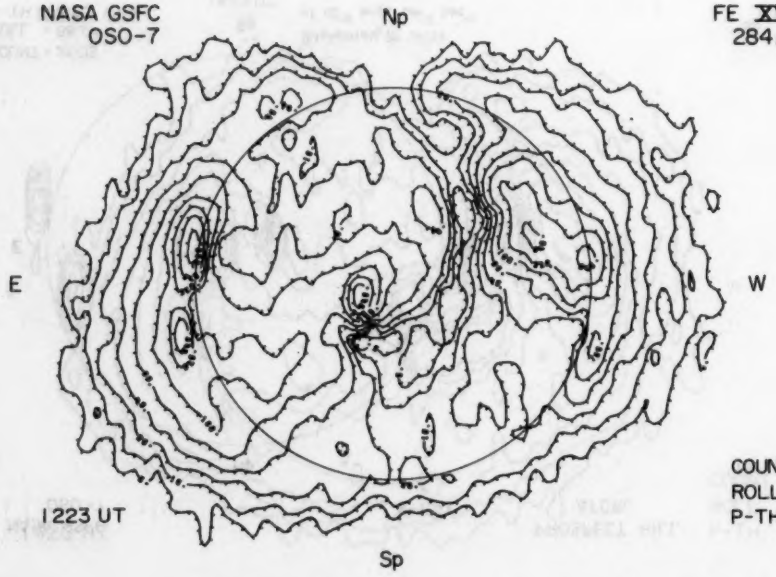
CORONA
NO DATA

NRL
OSO-7



1029 UT

NASA GSFC
OSO-7

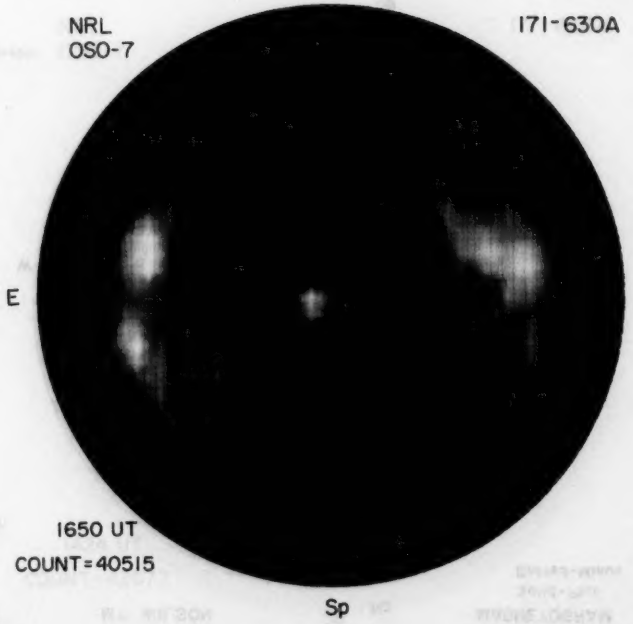


1223 UT

FE XV
284A

COUNT = 91293
ROLL = 87.0°
P-TH = 3.40

NRL
OSO-7



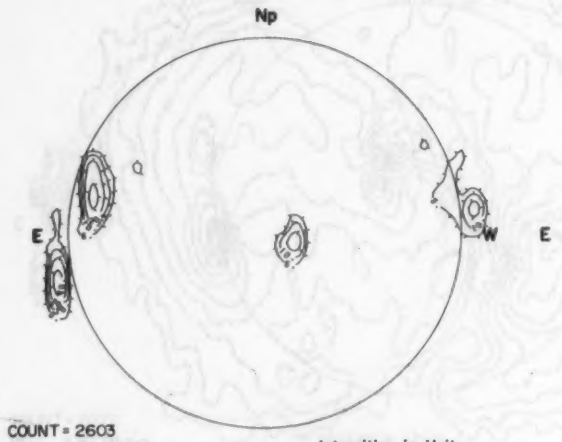
1650 UT
COUNT=40515

37
Feb 73

FEBRUARY 7, 1973 (P=-14.54, B_o=-6.44, L_o= 74.13)

NASA GSFC
OSO-7

X-RAY



COUNT = 2603
ROLL = 86.0°
P-TH = 3.35°

Sp
1420 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL

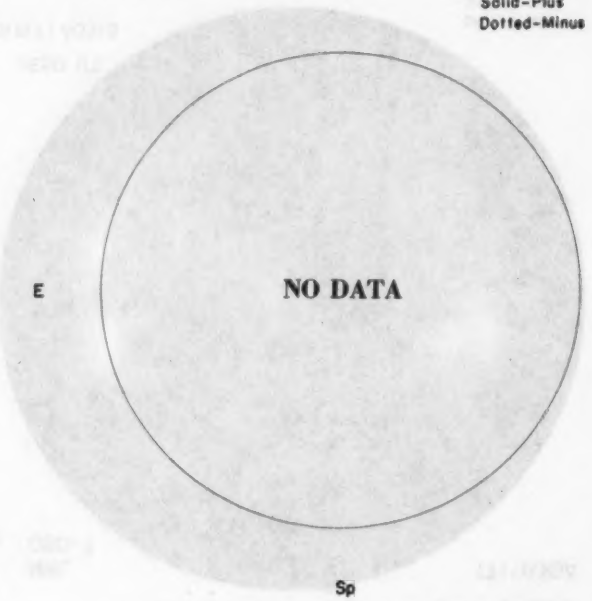
8.6 mm

Sp

Contours in Intervals of 200° K

MT. WILSON

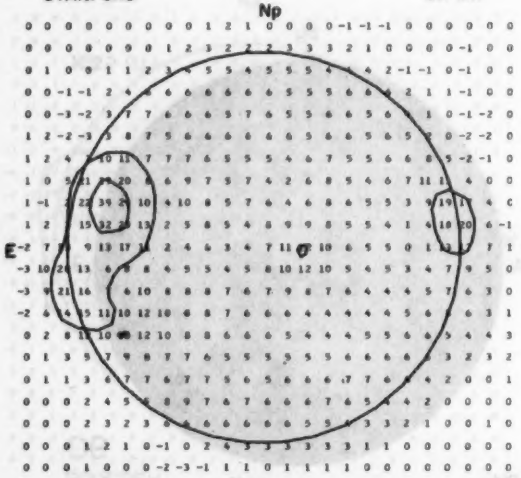
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

CALCIUM REPORT

CATANIA

GOOD
30 - 8847 ---
32 - 2429 ---
39 - 0902 ---
40 - 7483 ---
42 - 2357 ---

0855 UT

20-21 UT
Brightness Unit 5,000° K

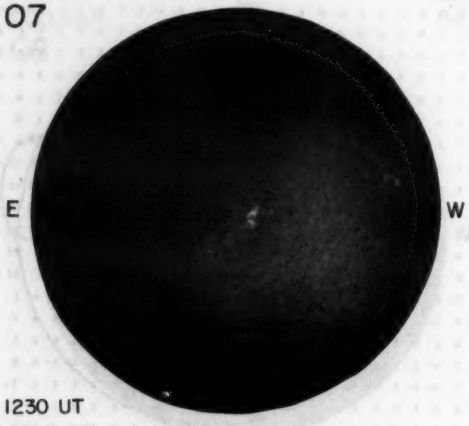
02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

0855 UT

RAMEY AFB
07

Np

Hα



E

W

1230 UT

Sp

BOULDER

Np

SUNSPOTS

NO DATA

E

W

CORONA
NO DATA

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

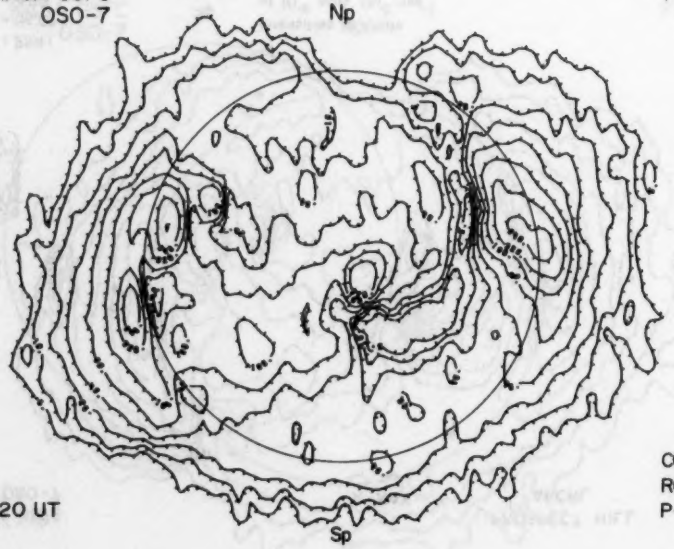
W

0934 UT

Sp

NASA GSFC
OSO-7

Np



E

W

1420 UT

Sp

FE XV
284A

COUNT = 89057
ROLL = 86.0°
P-TH = 3.35

Np

NRL
OSO-7

171-630A

E

W

1424 UT
COUNT=42677

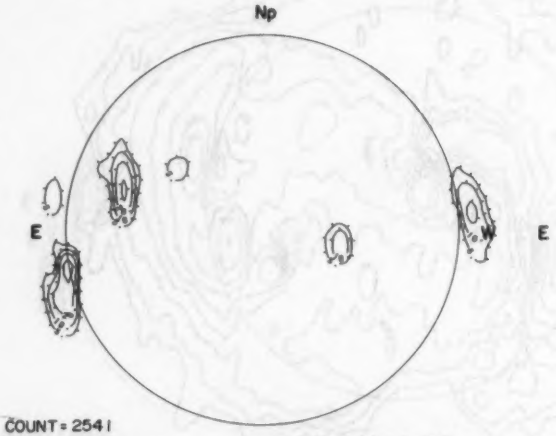
Sp

39
Feb 73

FEBRUARY 8, 1973 (P=-14.92, B_o=-6.50, L_o= 60.96)

NASA GSFC
OSO-7

X-RAY



COUNT = 2541
ROLL = 84.0°
P-TH = 3.20

1325 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

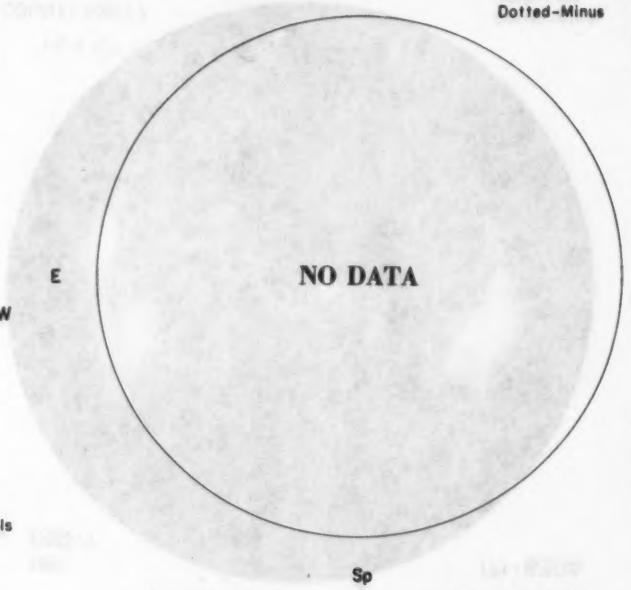
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

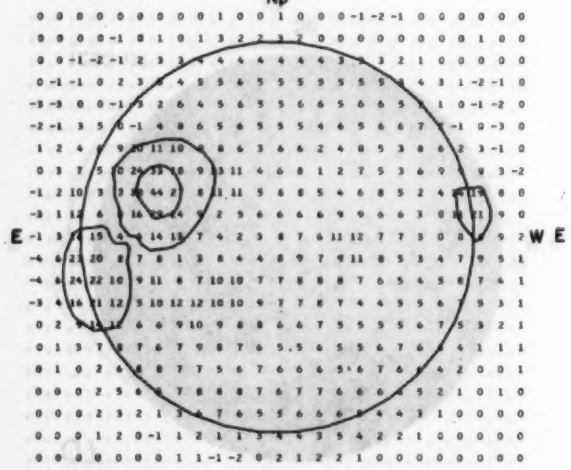
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

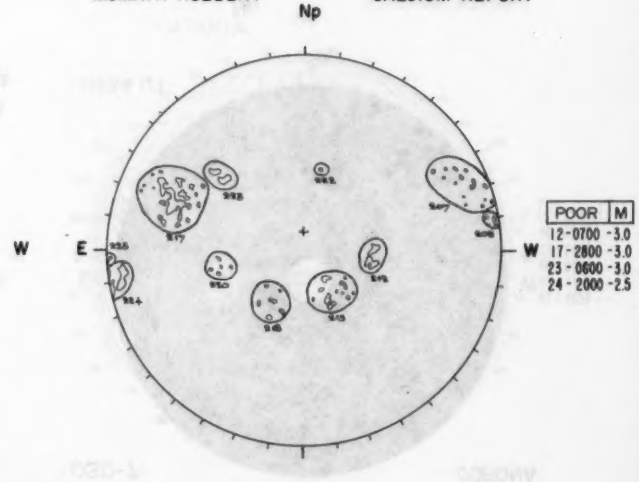
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



POOR	M
12-0700	-3.0
17-2800	-3.0
23-0600	-3.0
24-2000	-2.5

1405 UT

20-21 UT

Brightness Unit 5,000° K

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

1405 UT

BOULDER
08

Np

Hα

E

W

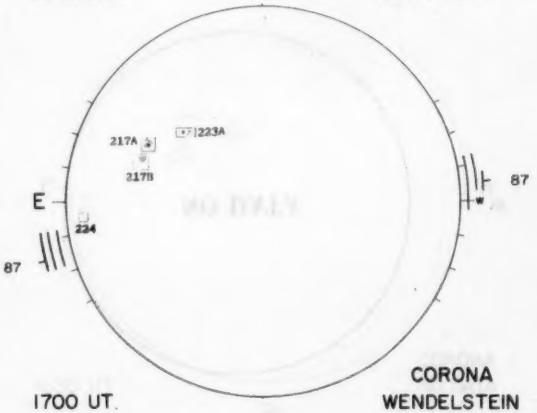
Sp

1726 UT

BOULDER

Np

SUNSPOTS



E

CORONA
WENDELSTEIN

1700 UT

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

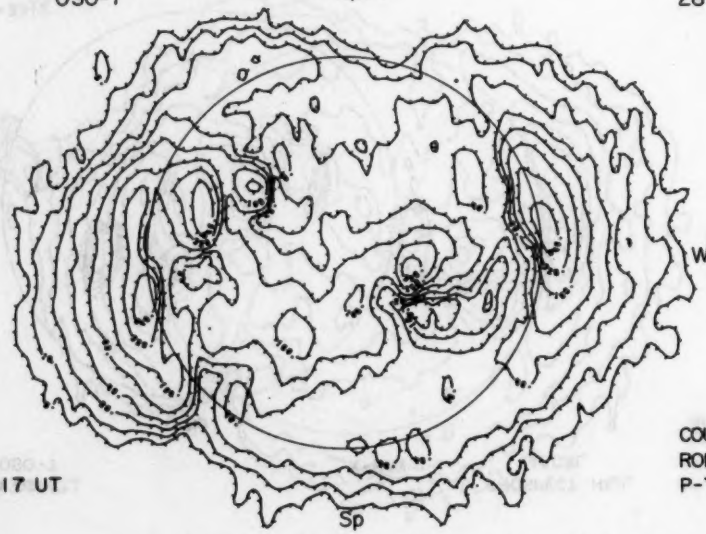
W

1010 UT

Sp

NASA GSFC
OSO-7

Np



E

W

Sp

1317 UT

FE XV
284A

COUNT = 95620
ROLL = 84.0°
P-TH = 3.20

NRL
OSO-7

Np

171-630A

E

W

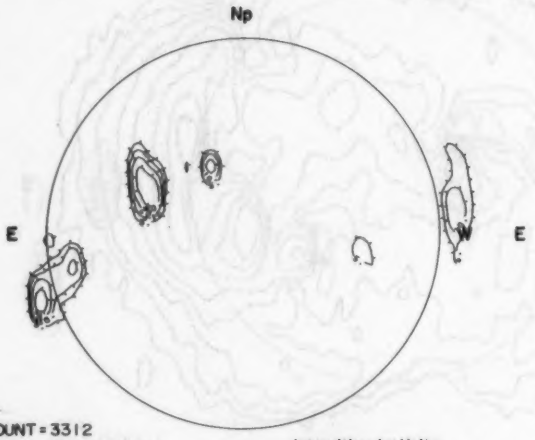
1322 UT

COUNT=44609

FEBRUARY 9, 1973 (P=-15.29, B_o=-6.55, L_o= 47.79)

NASA GSFC
OSO-7

X-RAY



COUNT = 3312
ROLL = 83.2°
P-TH = 3.1°

1349 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

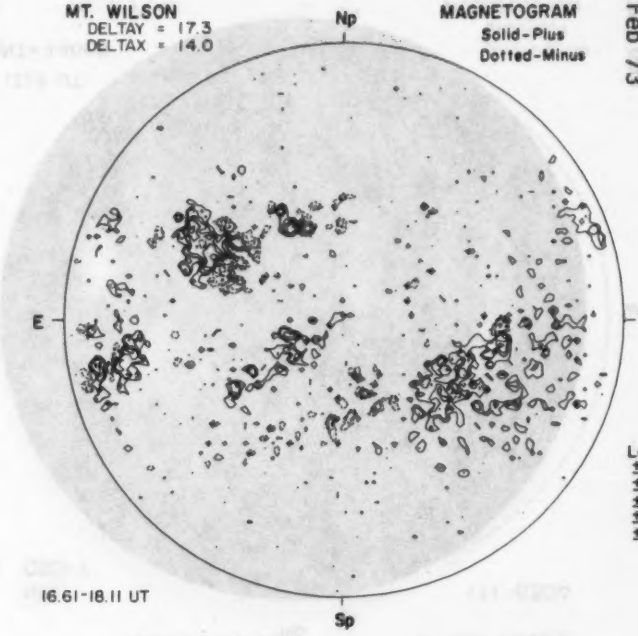
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON
DELTAY = 17.3
DELTAX = 14.0

MAGNETOGRAM
Solid-Plus
Dotted-Minus

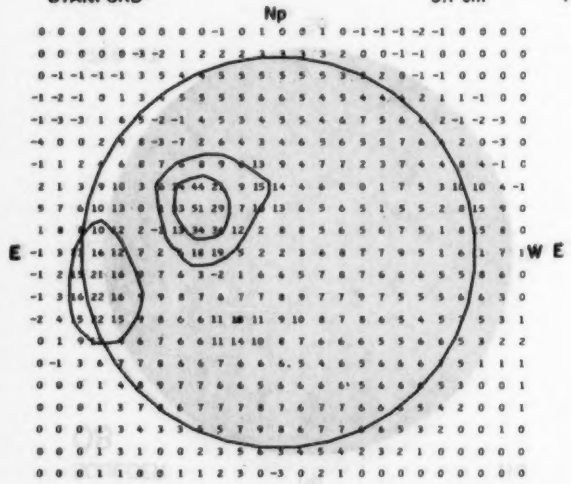


16.61-18.11 UT

Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

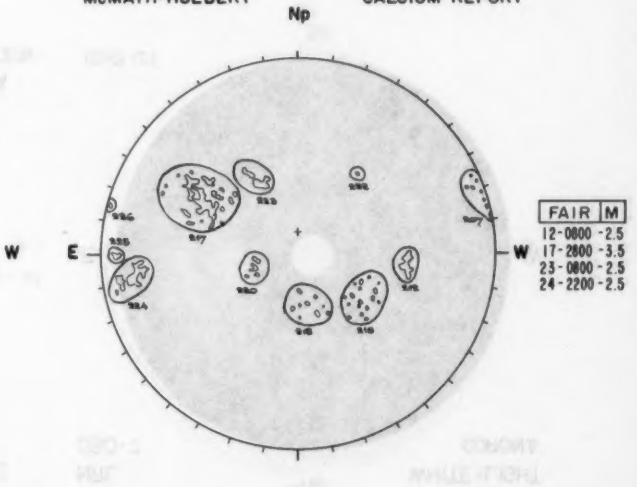
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



FAIR	M
12-0800	-2.5
17-2800	-3.5
23-0800	-2.5
24-2200	-2.5

1410 UT

20-21 UT

Brightness Unit 5,000° K

02-03 UT

Resolution 3 Minutes of Arc

Brightness Unit 1,700° K

1410 UT

BOULDER

09

Np

Hα

E

W

1630 UT

Sp

BOULDER

Np

SUNSPOTS

217A

223A

217B

225

E

W

1630 UT

CORONA

NO DATA

Sp

NRL

OSO-7

Np

WHITE-LIGHT

CORONA

E

W

0915 UT

Sp

NASA GSFC

OSO-7

Np

FE XV

284 A

E

W

1341 UT

Sp

COUNT = 86937

ROLL = 83.2°

P-TH = 3.10

NRL

OSO-7

Np

171-630A

E

W

1402 UT

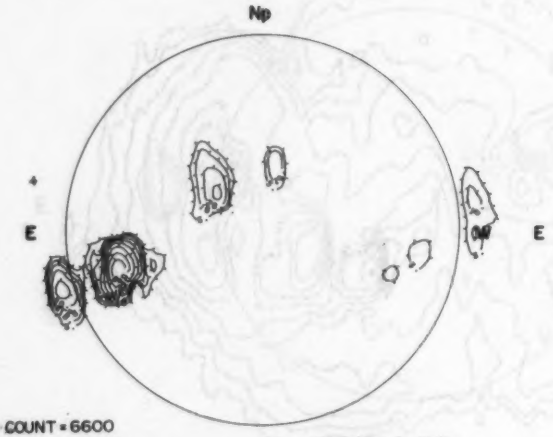
COUNT=43429

Sp

FEBRUARY 10, 1973 (P=-15.66, B_o=-6.61, L_o= 34.63)

NASA GSFC
OSO-7

X-RAY



COUNT=6600
ROLL =81.2°
P-TH =3.00

1425 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

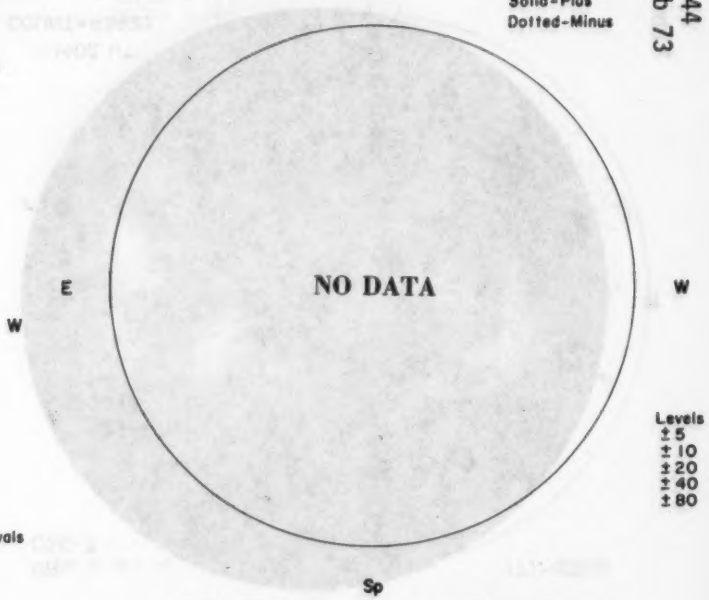
PROSPECT HILL
AFCRL

6.6 mm

Contours in intervals of 200° K

MT. WILSON

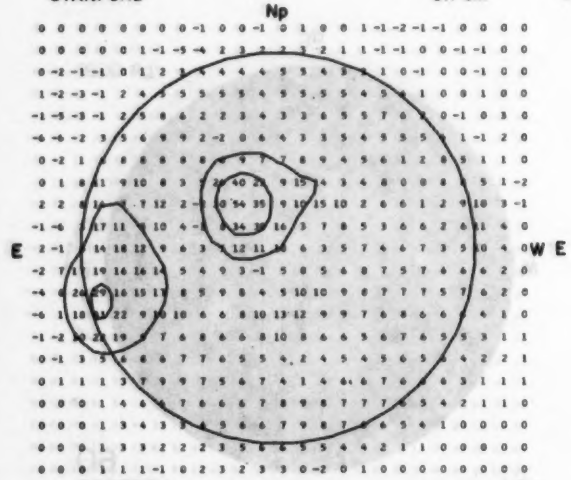
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

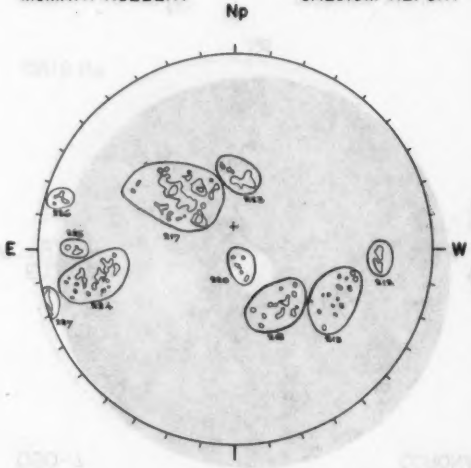
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT

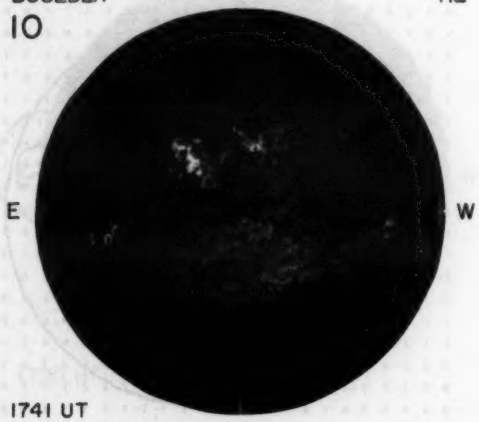


FAIR	S
12-0800	-2.5
17-3100	-3.5
23-0800	-2.5
24-2000	-3.0
27-1000	-3.5

1635 UT

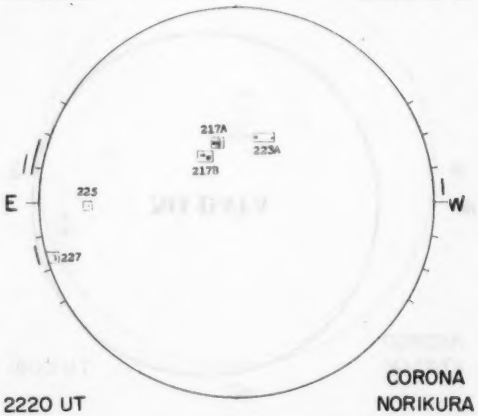
20-21 UT 02-03 UT Brightness Unit 1,700° K 1635 UT

BOULDER
10



1741 UT

BOULDER



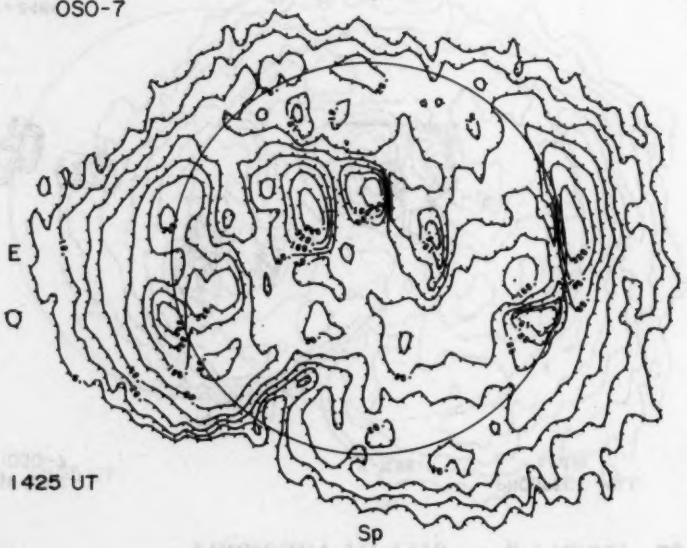
2220 UT

CORONA
NORIKURA

NRL
OSO-7

0931 UT

NASA GSFC
OSO-7



1425 UT

FE XV
284A

COUNT= 84276
ROLL = 81.2°
P-TH = 3.00

NRL
OSO-7

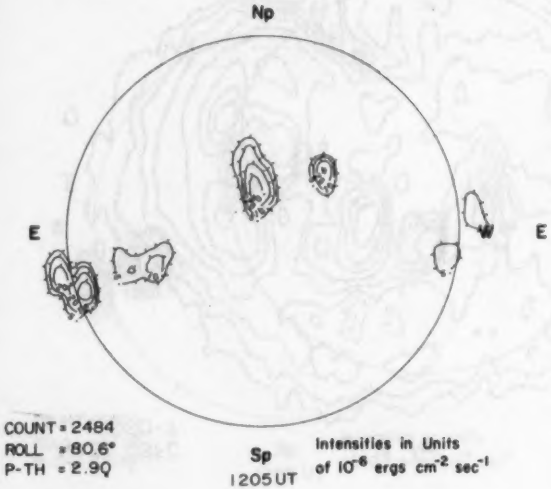
1250 UT
COUNT=42753

45
Feb 73

FEBRUARY 11, 1973 (P=-16.02, B_o=-6.66, L_o= 21.46)

NASA GSFC
OSO-7

X-RAY



COUNT = 2484
ROLL = 80.6°
P-TH = 2.9Q

1205 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

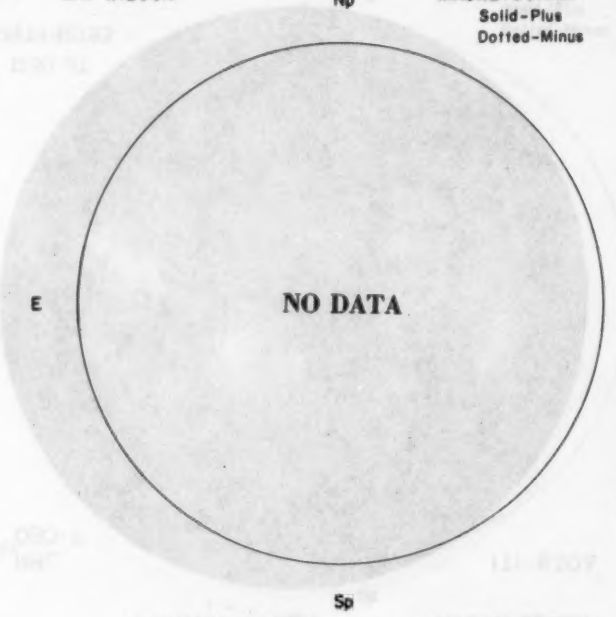
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

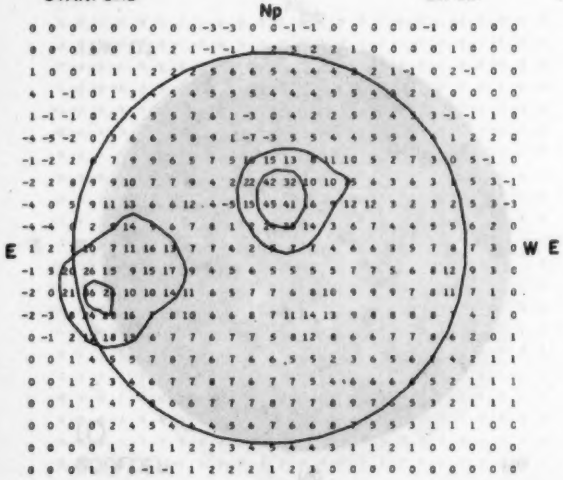
MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

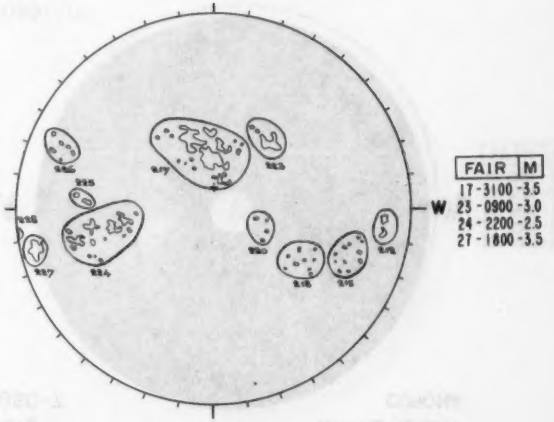
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



1445 UT

20-21 UT
Brightness Unit 5,000° K

02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

1445 UT

BOULDER
11
Np
Hα
E
W
Sp
1720 UT

BOULDER
Np
SUNSPOTS
217A
223A
217B
225
227
E
W
Sp
1800 UT
CORONA
NO DATA

NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
Sp
0836 UT

NASA GSFC
OSO-7
Np
E
Sp
1205 UT

FE XV
284A
W
E
COUNT = 86636
ROLL = 80.6°
P-TH = 2.90

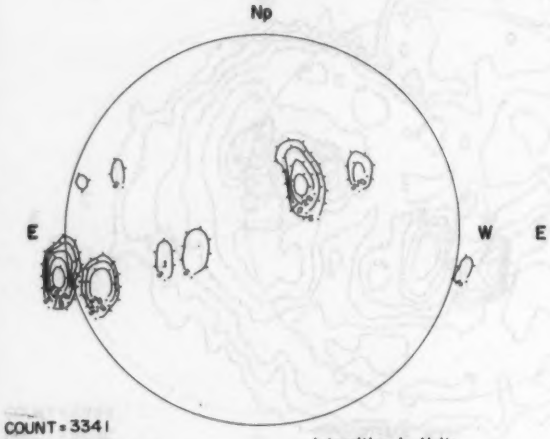
NRL
OSO-7
Np
171-630A
W
E
Sp
1153 UT
COUNT = 42305

47
Feb 73

FEBRUARY 12, 1973 (P=-16.38, B_o=-6.71, L_o= 8.29)

NASA GSFC
OSO-7

X-RAY



COUNT=3341
ROLL =80.3°
P-TH =2.75

1123 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

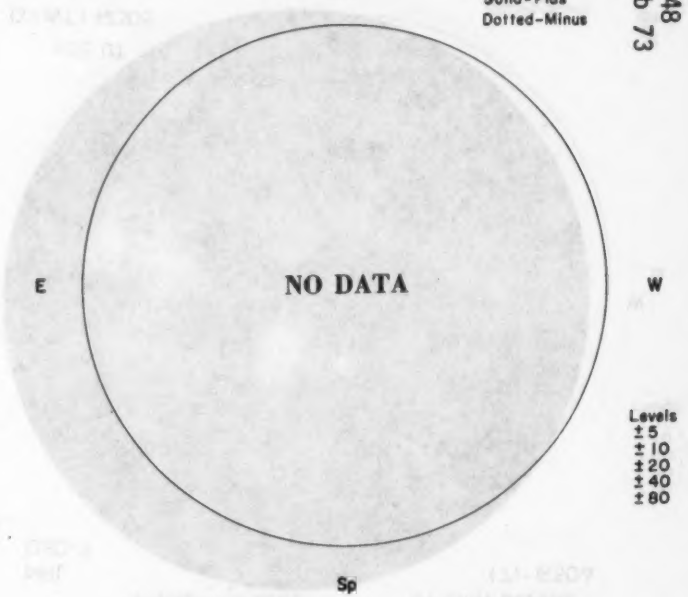
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

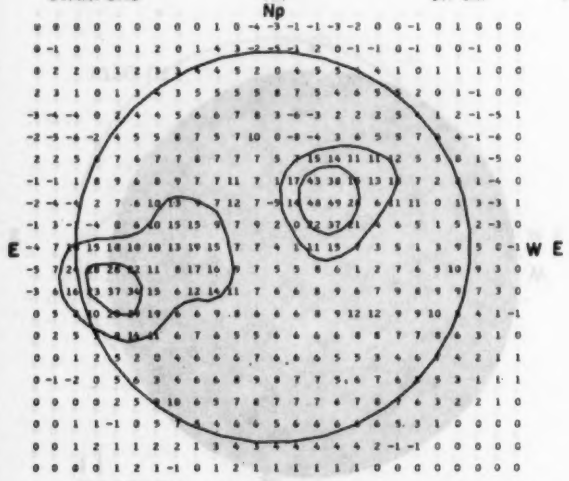
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

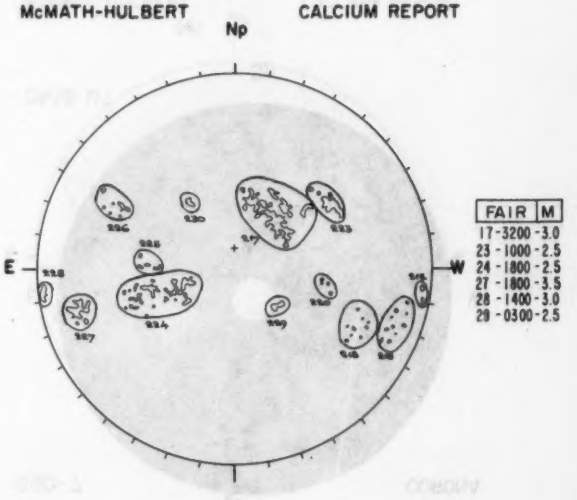
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



FAIR	M
17 - 3200	- 3.0
23 - 1000	- 2.5
24 - 1800	- 2.5
27 - 1800	- 3.5
28 - 1400	- 3.0
29 - 0300	- 2.5

1410 UT

20-21 UT

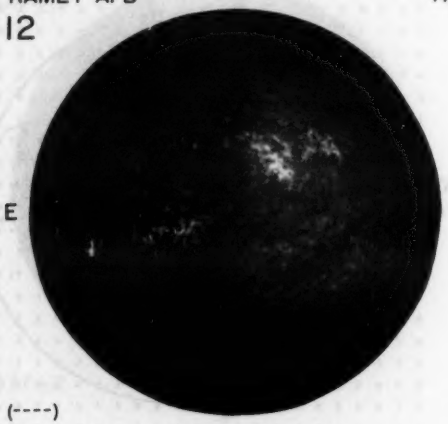
02-03 UT Brightness Unit 1,700° K

1410 UT

RAMEY AFB
12

Np

Hα

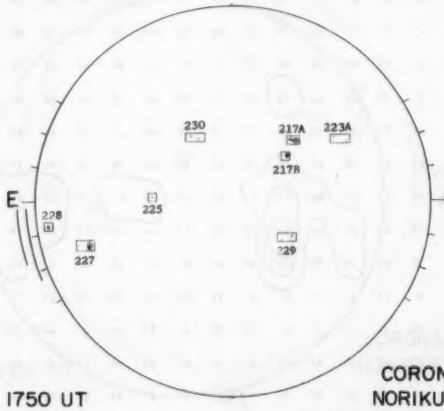


(----)

BOULDER

Np

SUNSPOTS



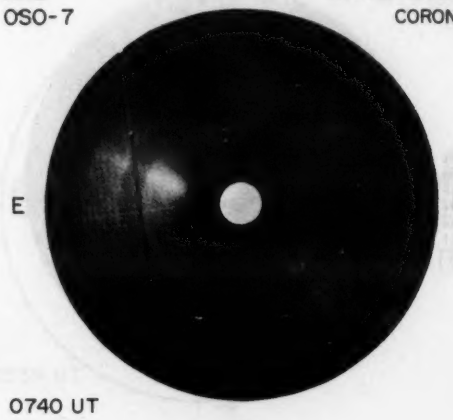
1750 UT

CORONA
NORIKURA
NO DATA SW LIMB

NRL
OSO-7

Np

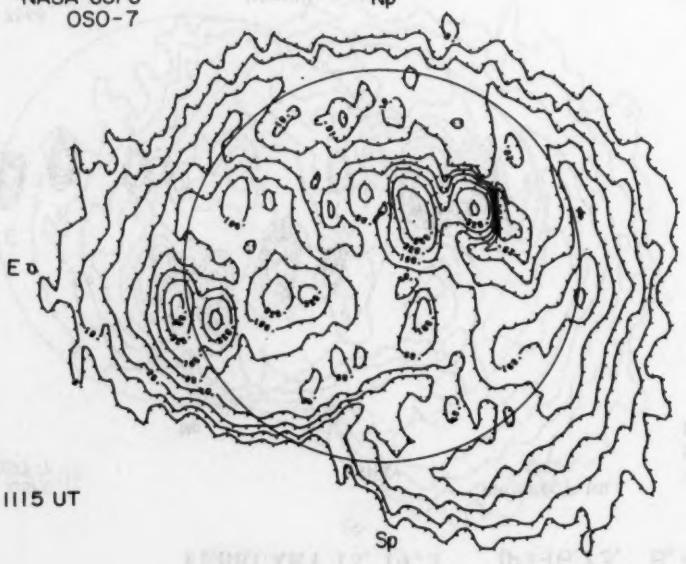
WHITE-LIGHT
CORONA



0740 UT

NASA GSFC
OSO-7

Np



1115 UT

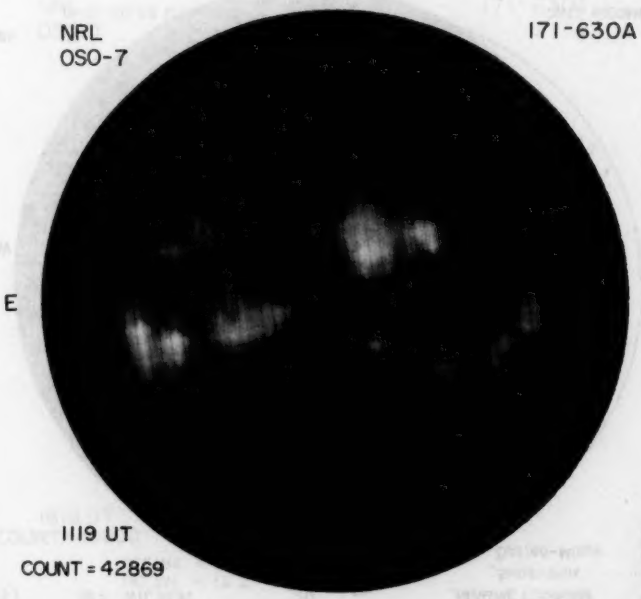
FE XV
284A

COUNT = 88361
ROLL = 80.3°
P-TH = 2.75

NRL
OSO-7

Np

171-630A



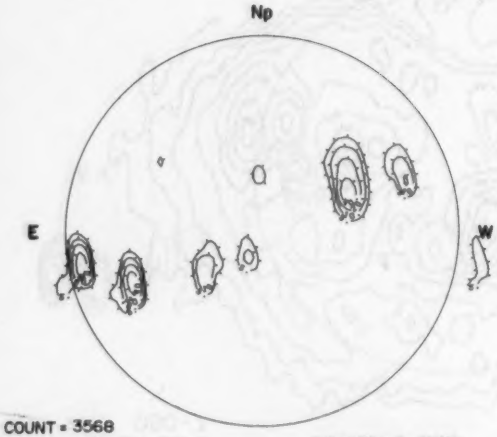
1119 UT

COUNT = 42869

49
Feb 73

FEBRUARY 13, 1973 (P=-16.73, B_o=-6.76, L_o=355.13)

NASA GSFC
OSO-7
X-RAY



COUNT = 3568
ROLL = 77.5°
P-TH = 2.65

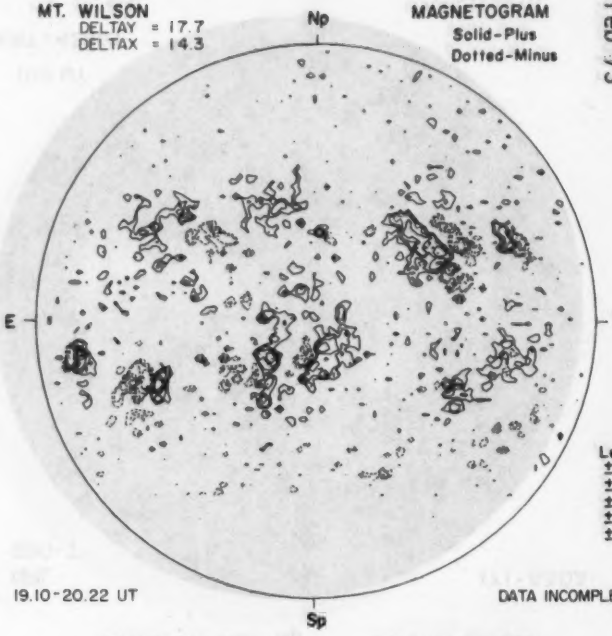
1127 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL
8.6 mm

Contours in Intervals of 200° K

MT. WILSON
DELTAY = 17.7
DELTAX = 14.3
MAGNETOGRAM
Solid-Plus
Dotted-Minus

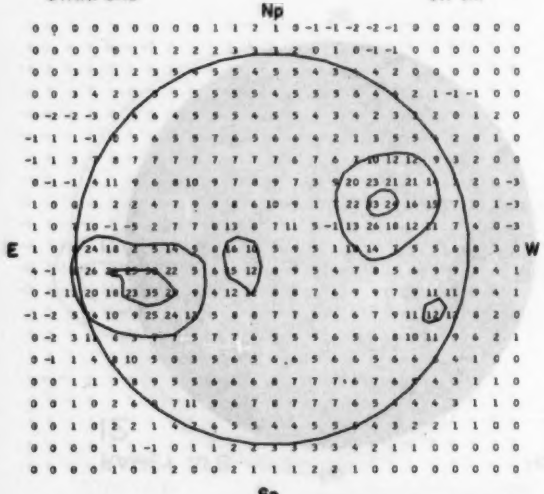


Levels
±5
±10
±20
±40
±80

19.10-20.22 UT

DATA INCOMPLETE

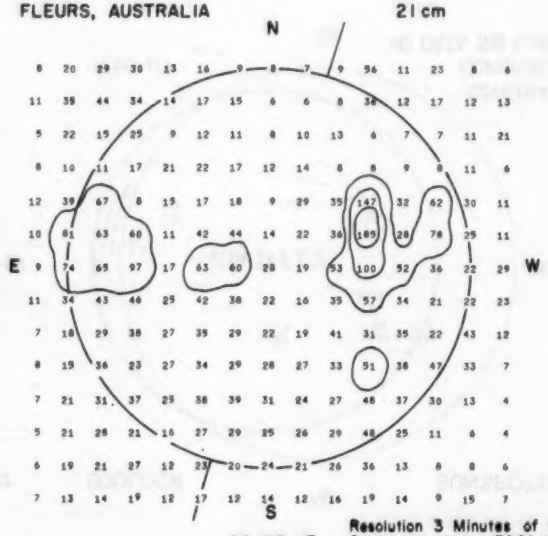
STANFORD
9.1 cm



20-21 UT

Brightness Unit 5,000° K

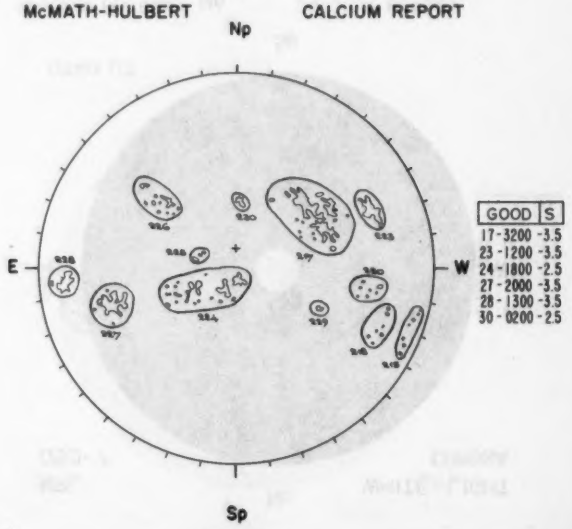
FLEURS, AUSTRALIA
21 cm



02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT
CALCIUM REPORT



GOOD	S
17 - 3200	-3.5
23 - 1200	-3.5
24 - 1800	-2.5
27 - 2000	-3.5
28 - 1300	-3.5
30 - 0200	-2.5

1600 UT

BOULDER
Hα

BOULDER

SUNSPOTS
NRL

WHITE-LIGHT

20-21 UT

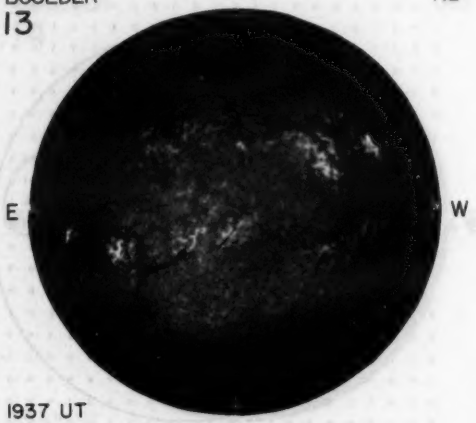
02-03 UT Brightness Unit 1,700° K

1600 UT

BOULDER
13

Np

Hα

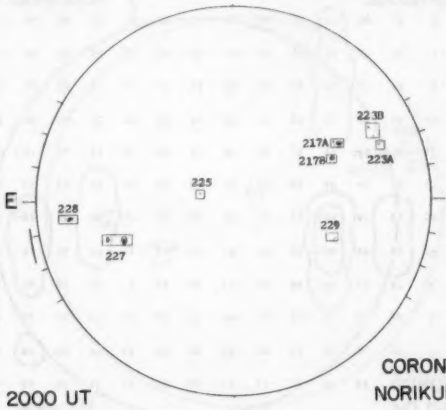


1937 UT

BOULDER

Np

SUNSPOTS



CORONA
NORIKURA

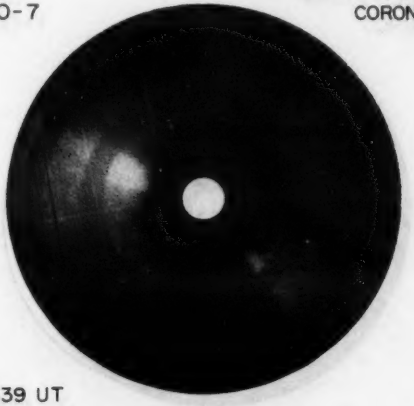
2000 UT

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



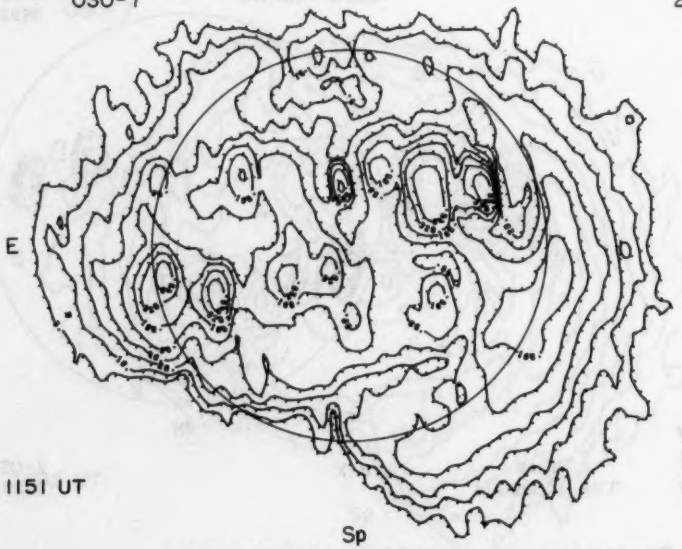
2339 UT

Sp

NASA GSFC
OSO-7

Np

FE XV
284A



COUNT = 90196
ROLL = 77.5°
P-TH = 2.65

1151 UT

Sp

Np

NRL
OSO-7

171-630A

1615 UT
COUNT=40800

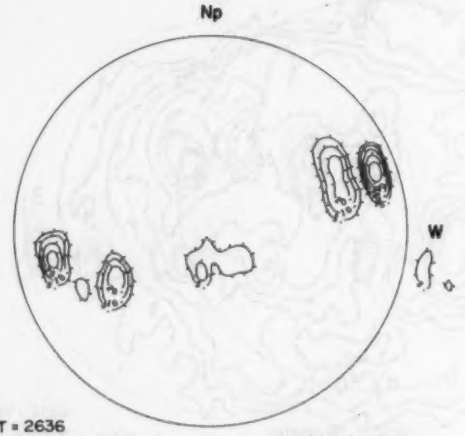
Sp

51
Feb 73

FEBRUARY 14, 1973 (P=-17.07, B_o=-6.80, L_o=341.96)

NASA GSFC
OSO-7

X-RAY



COUNT = 2636
ROLL = 74.8°
P-TH = 2.55

1039 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

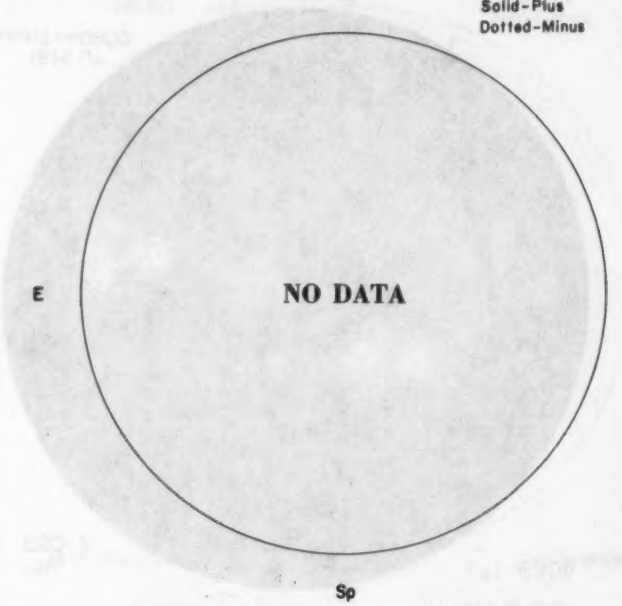
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

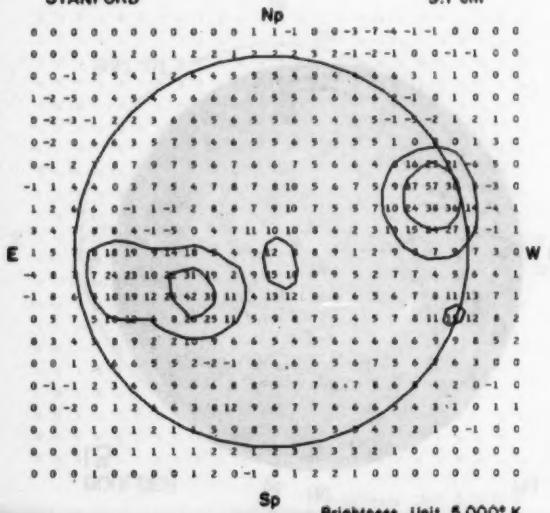
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm

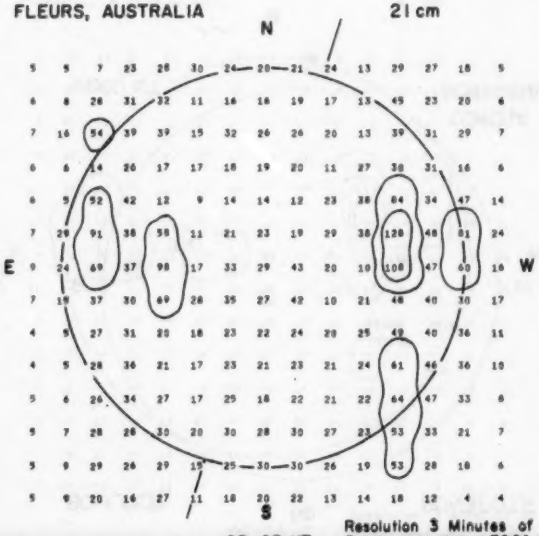


20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

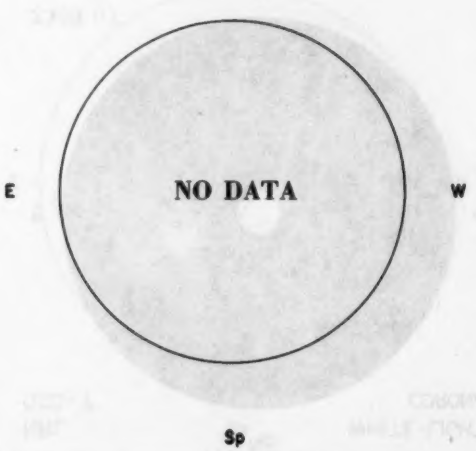


02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



Sp

20-21 UT Brightness Unit 5,000° K

S

02-03 UT Resolution 3 Minutes of Arc Brightness Unit 1,700° K

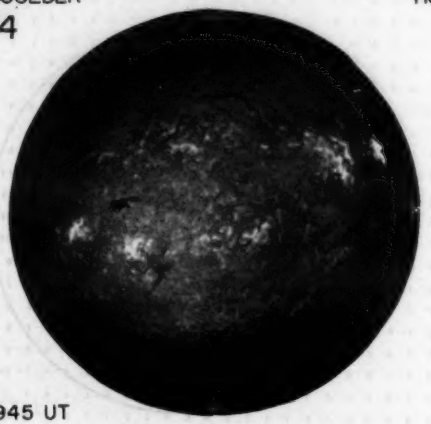
Sp

BOULDER

14

Np

Hα



E W

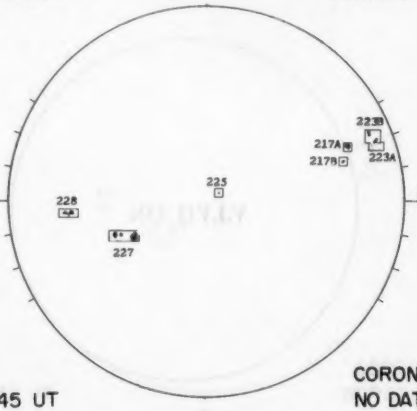
1945 UT

Sp

BOULDER

Np

SUNSPOTS



E W

1845 UT

Sp

CORONA

NO DATA

NRL

OSO-7

Np

WHITE-LIGHT

CORONA

E W

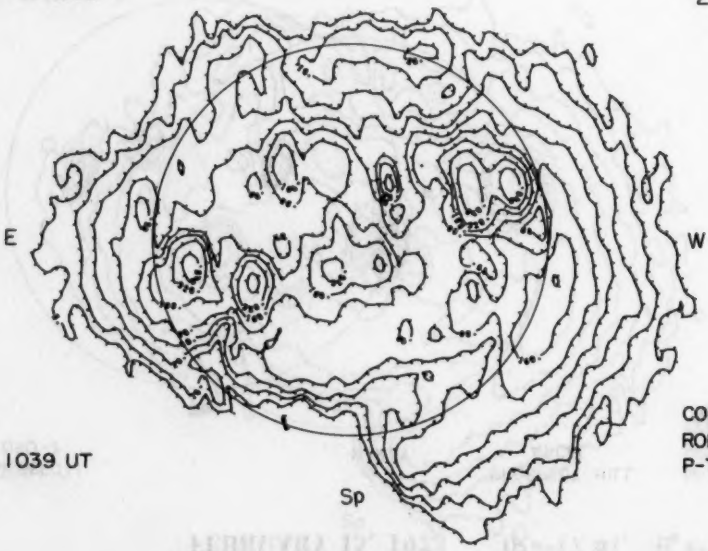
0853 UT

Sp

NASA GSFC

OSO-7

Np



E W

1039 UT

Sp

FE XV

284A

COUNT = 83997

ROLL = 74.8°

P-TH = 2.55

Np

NRL

OSO-7

171-630A

E W

1036 UT

COUNT=44575

53

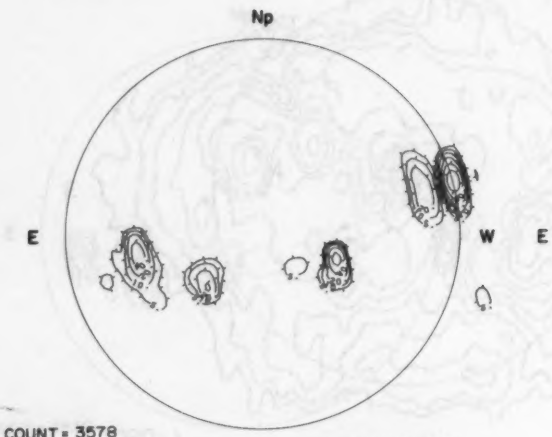
Feb 73

FEBRUARY 15, 1973 (P=-17.41, B_o=-6.84, L_o=328.79)

54 Feb 73

NASA GSFC
OSO-7

X-RAY



COUNT = 3578
ROLL = 74.0°
P-TH = 2.4ρ

0935 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

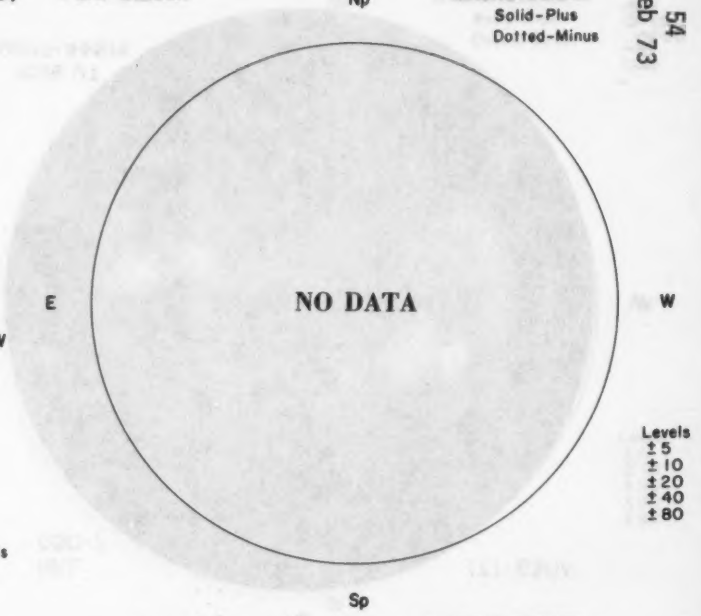
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

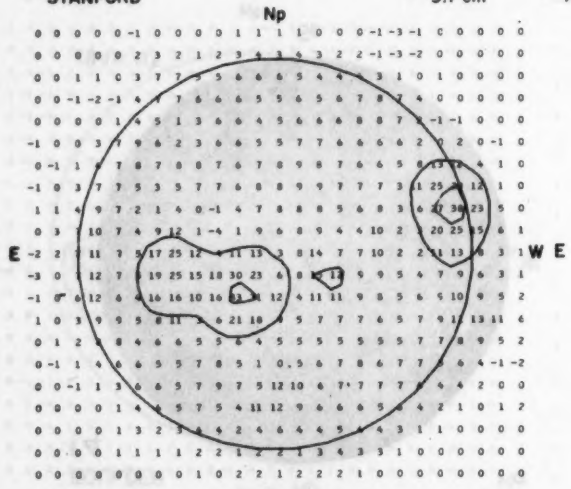
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

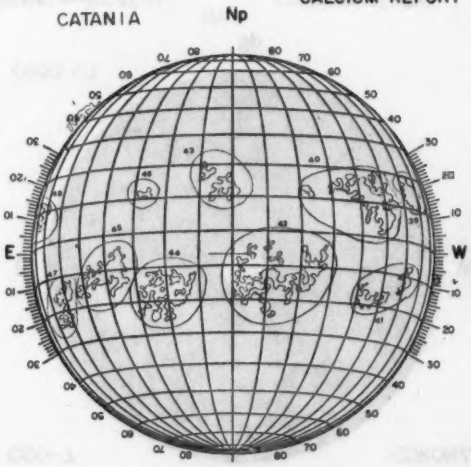
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

CATANIA

CALCIUM REPORT



FAIR

39-3090 ---
40-6939 ---
42-5464 ---
44-4440 ---
45-0365 ---

0800 UT

Sp

Brightness Unit 5,000° K

20-21 UT

S

Resolution 3 Minutes of Arc

Brightness Unit 1,700° K

02-03 UT

Sp

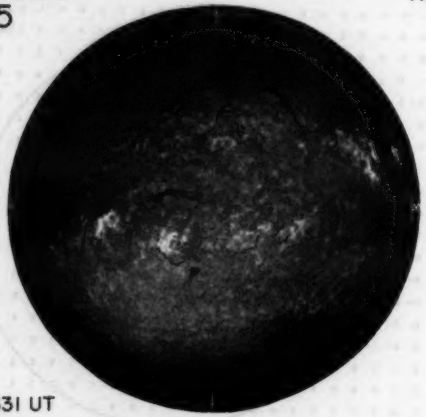
0800 UT

BOULDER

15

Np

Hα



E

W

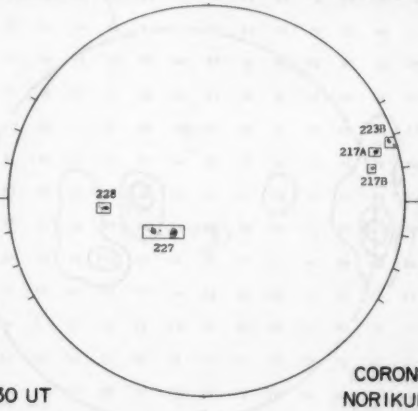
1631 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

CORONA

NORIKURA

1630 UT

Sp

NRL

OSO-7

Np

WHITE-LIGHT

CORONA

E

W

0625 UT

Sp

NASA GSFC

OSO-7

Np

FE XV

284A

E

W

COUNT =85502

ROLL =74.0°

P-TH =2.40

0951 UT

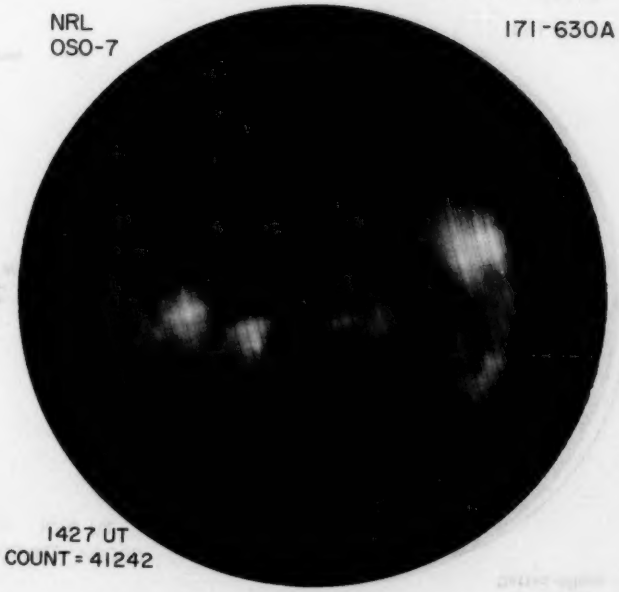
Sp

Np

NRL

OSO-7

171-630A



E

W

1427 UT

COUNT = 41242

Sp

55

Feb 73

FEBRUARY 16, 1973 (P=-17.75, B_o=-6.89, L_o=315.62)

MT. WILSON

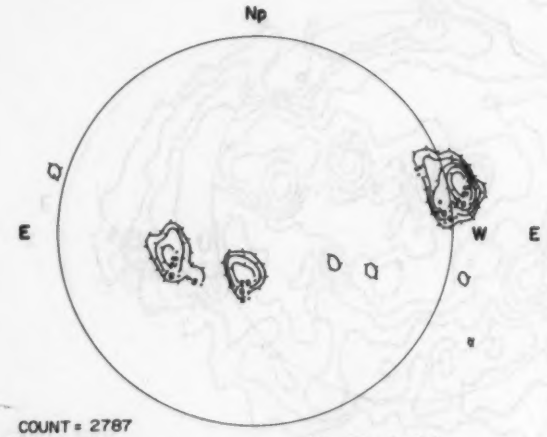
Np

MAGNETOGRAM
Solid-Plus
Dotted-Minus

56
Feb 73

NASA GSFC
OSO-7

X-RAY



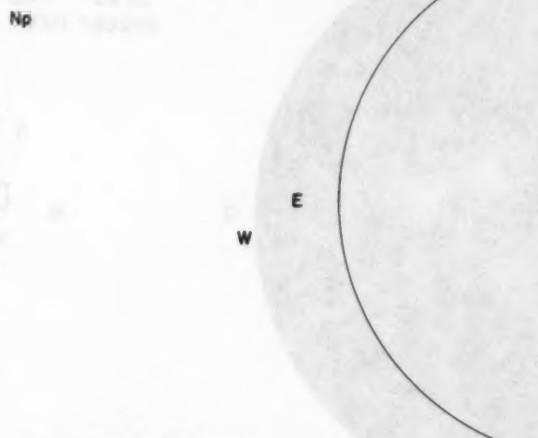
COUNT = 2787
ROLL = 70.5°
P-TH = 2.30

1011 UT

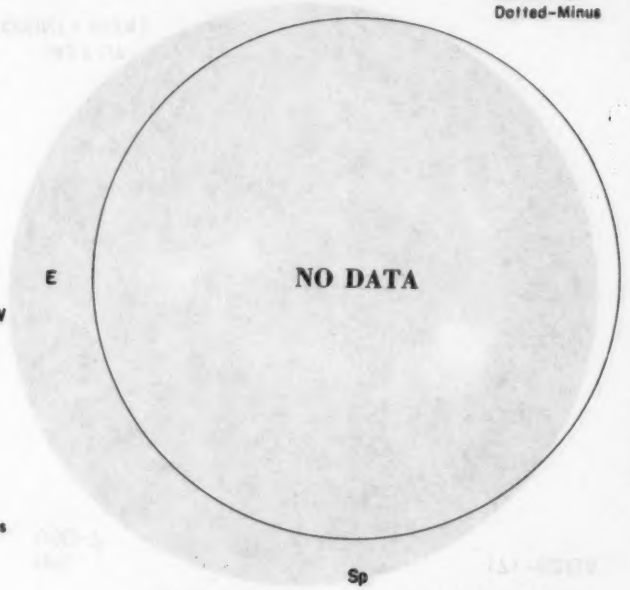
Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL

8.6 mm



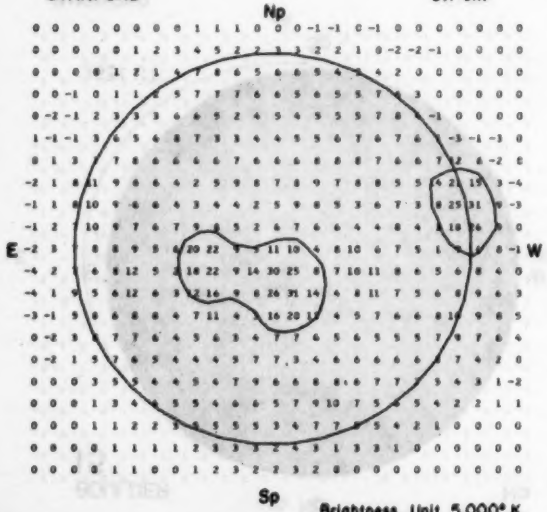
Contours in Intervals of 200° K



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm

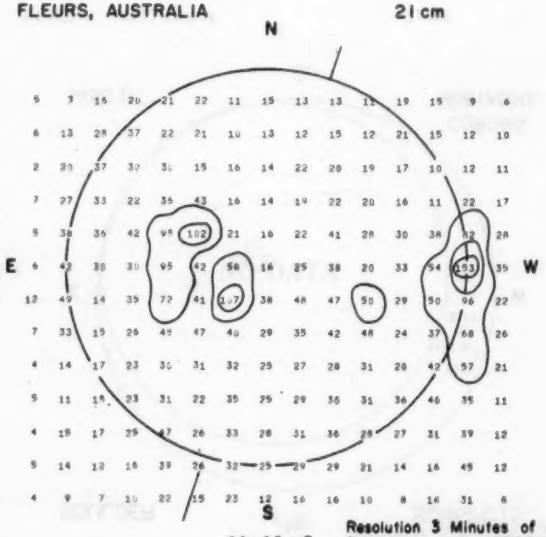


20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

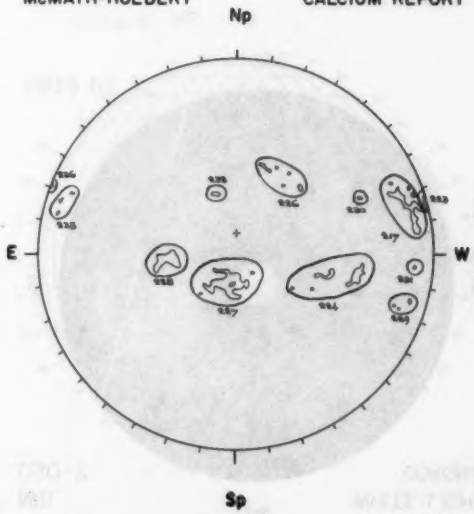


02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



POOR	D
17 - 3000	-3.5
24 - 1400	-2.5
27 - 2000	-3.5
28 - 1300	-3.5
30 - 0100	-2.5

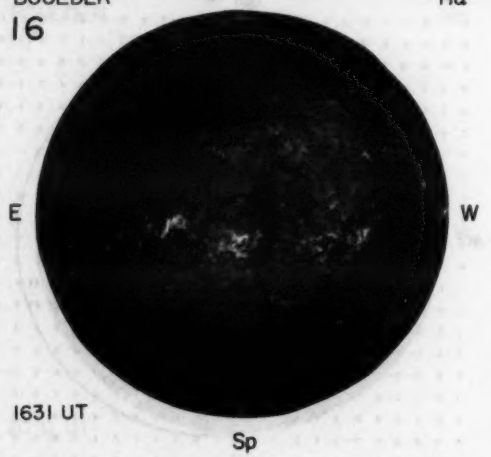
1500 UT

Sp
20-21 UT
Brightness Unit 5,000° K

02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

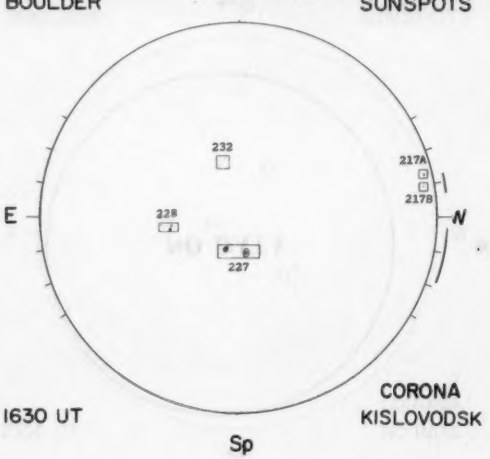
1500 UT

BOULDER
16



1631 UT

BOULDER

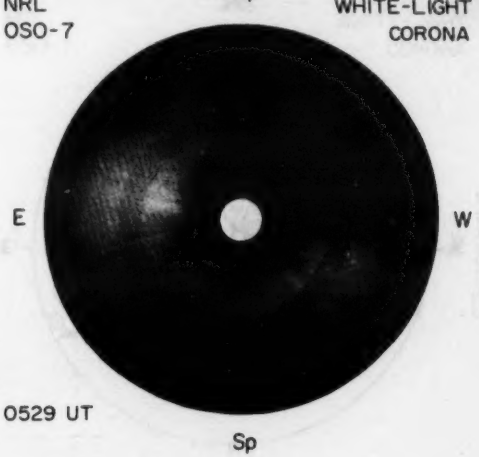


CORONA
KISLOVODSK

1630 UT

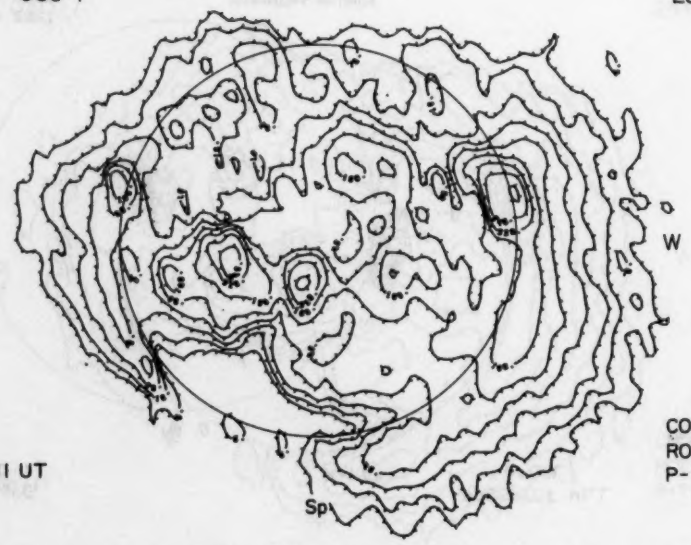
Sp

NRL
OSO-7



0529 UT

NASA GSFC
OSO-7

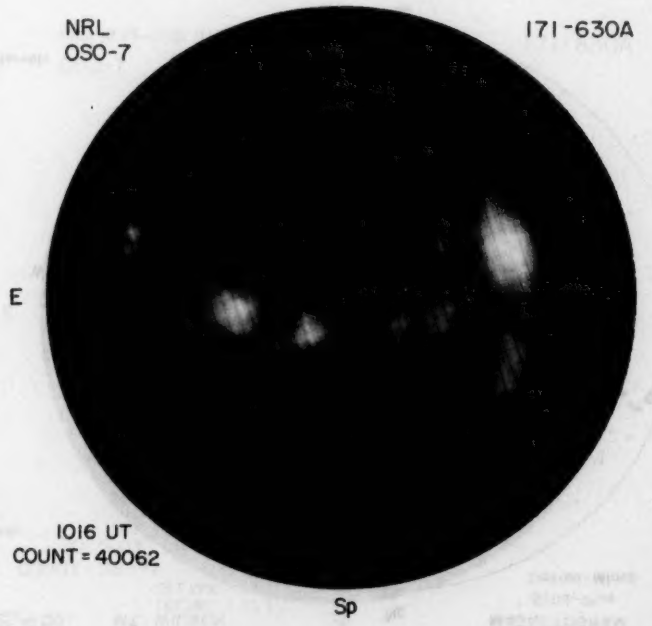


1011 UT

FE XV
284A

COUNT = 76407
ROLL = 70.5°
P-TH = 2.30

NRL
OSO-7



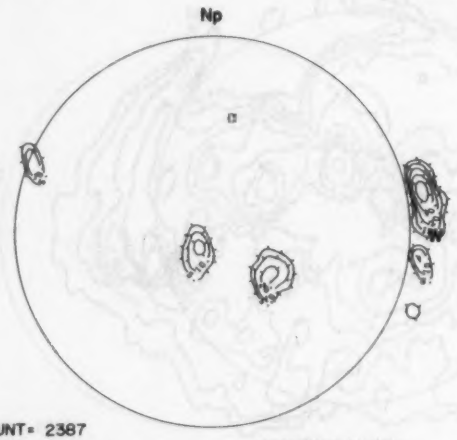
1016 UT
COUNT = 40062

57
Feb 73

FEBRUARY 17, 1973 (P=-18.08, B_o=-6.92, L_o=302.45)

58
Feb 73

NASA GSFC
OSO-7
X-RAY



COUNT= 2387
ROLL = 69.1°
P-TH = 2.20

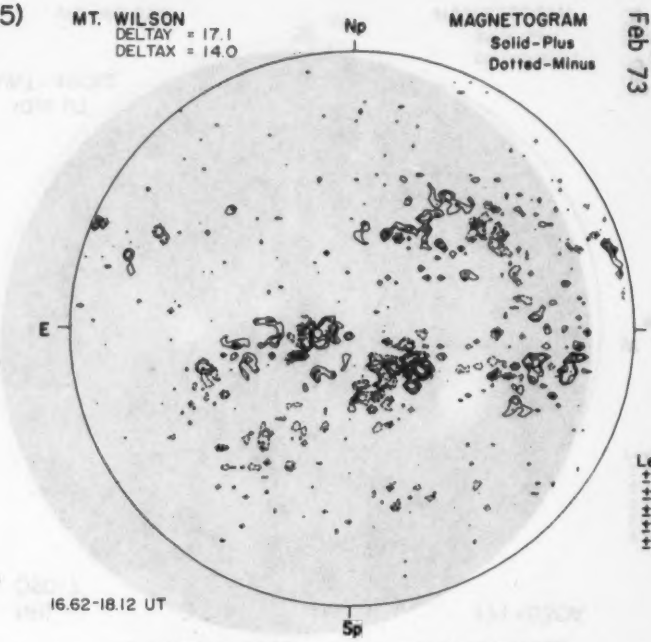
2017 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL
8.6 mm

Contours in Intervals of 200° K

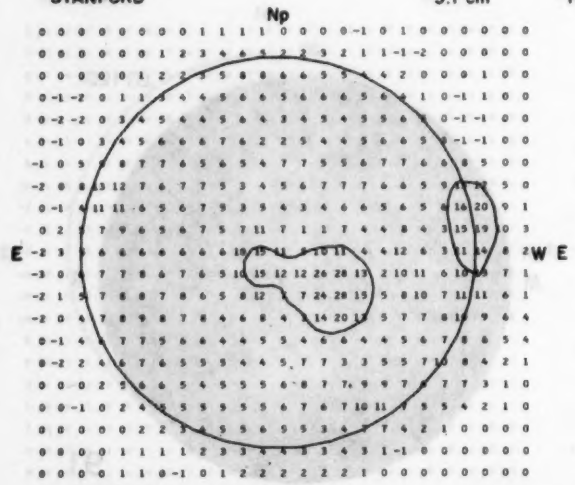
MT. WILSON
DELTAY = 17.1
DELTAX = 14.0
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

16.62-18.12 UT

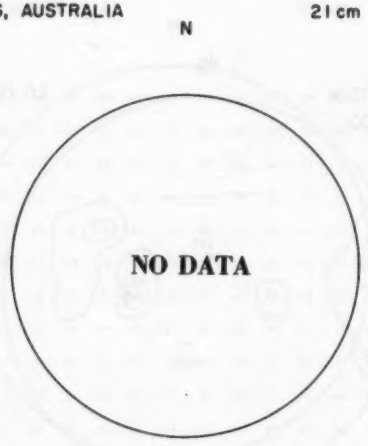
STANFORD
9.1 cm



20-21 UT

Brightness Unit 5,000° K

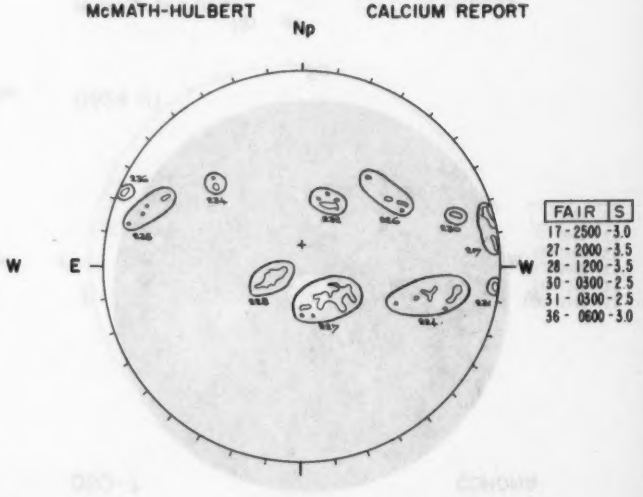
FLEURS, AUSTRALIA
21 cm



02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT
CALCIUM REPORT



FAIR	S
17 - 2500	-3.0
27 - 2000	-3.5
28 - 1200	-3.5
30 - 0300	-2.5
31 - 0300	-2.5
36 - 0600	-3.0

1430 UT

Sp
20-21 UT
Brightness Unit 5,000° K

02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

1430 UT

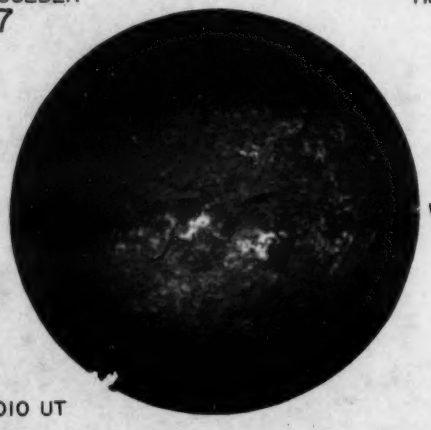
BOULDER
17

Np

Hα

E

W



2010 UT

Sp

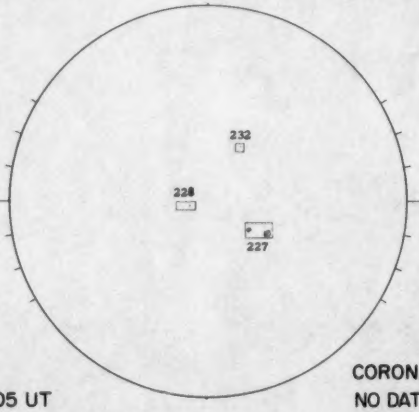
BOULDER

Np

SUNSPOTS

E

W



2105 UT

Sp

CORONA
NO DATA

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

NO DATA

W

Sp

NASA GSFC
OSO-7

Np

FE XV
284A

E

W

2008 UT

Sp

COUNT = 59428
ROLL = 69.1°
P-TH = 2.20

Np

NRL
OSO-7

171-630A

E

W

2005 UT
COUNT = 38972

Sp

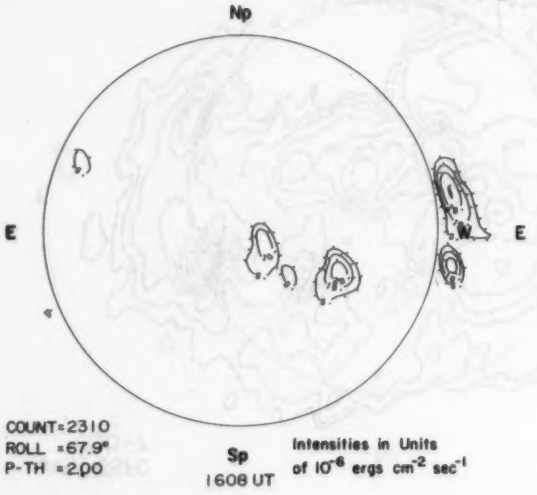
59
Feb 73

FEBRUARY 18, 1973 (P=-18.40, B_o=-6.96, L_o=289.28)

60 Feb 73

NASA GSFC
OSO-7

X-RAY



COUNT=2310
ROLL =67.9°
P-TH =2.00

1608 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

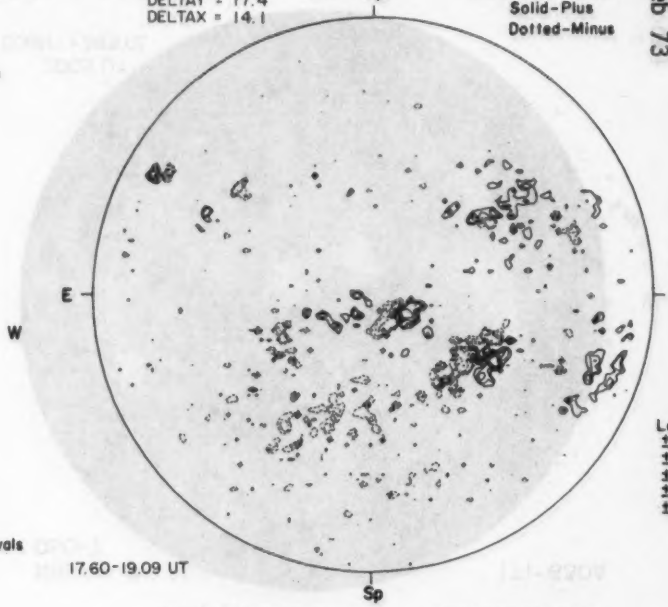
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON
DELTAY = 17.4
DELTAX = 14.1

MAGNETOGRAM
Solid-Plus
Dotted-Minus

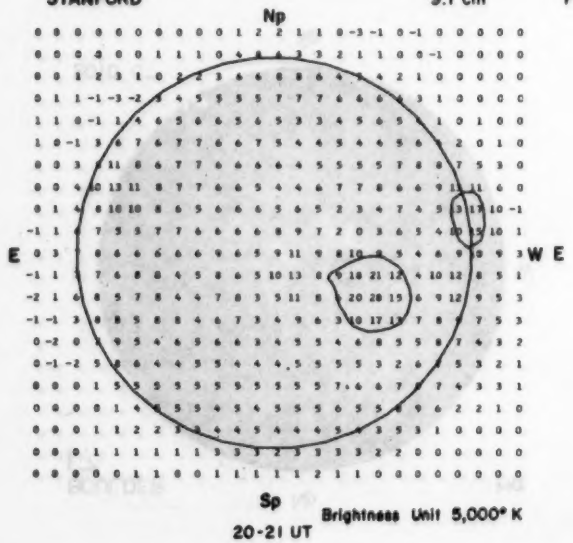


Levels
±5
±10
±20
±40
±80

17.60-19.09 UT

STANFORD

9.1 cm



Brightness Unit 5,000° K

20-21 UT

FLEURS, AUSTRALIA

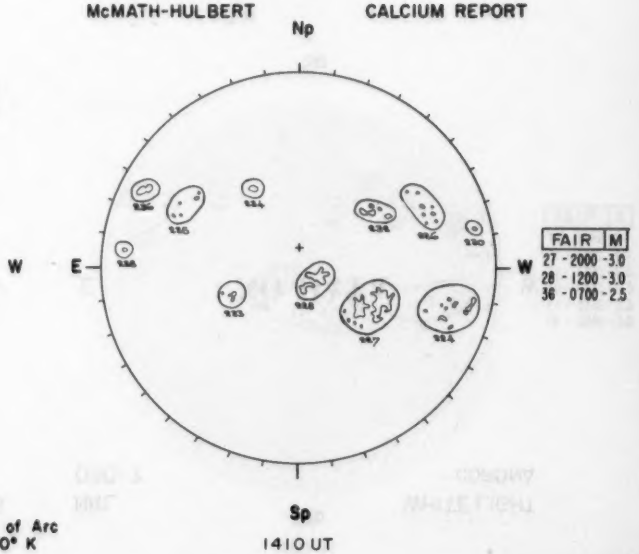
21 cm

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

02-03 UT

McMATH-HULBERT

CALCIUM REPORT



FAIR	M
27 - 2000	-3.0
28 - 1200	-3.0
36 - 0700	-2.5

1410 UT

20-21 UT

02-03 UT Brightness Unit 1,700° K

1410 UT

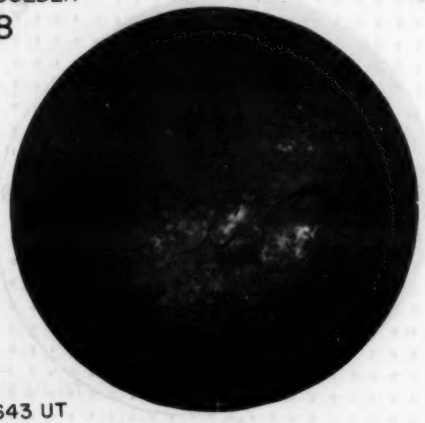
BOULDER
18

Np

Hα

E

W



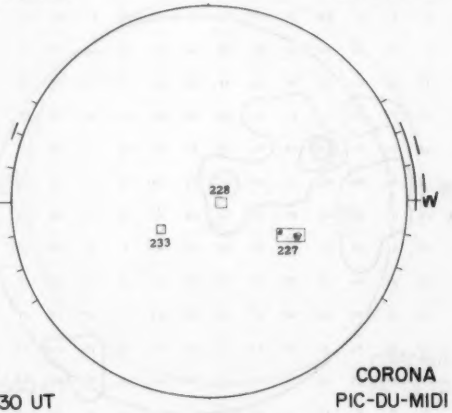
1643 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1630 UT

CORONA
PIC-DU-MIDI

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

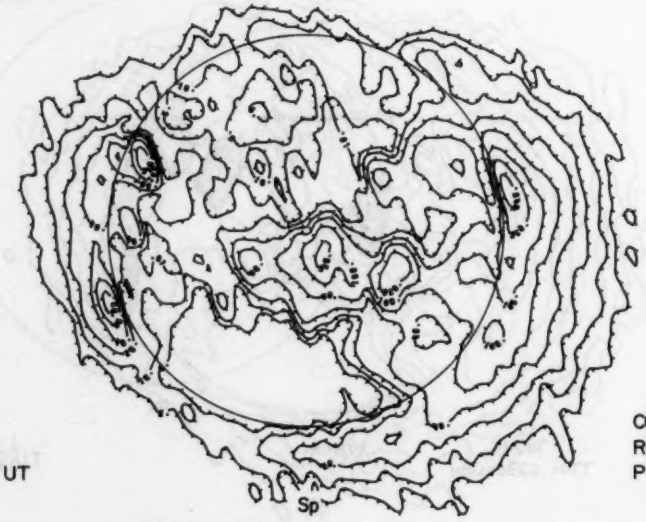
W

0336 UT

Sp

NASA GSFC
OSO-7

Np



E

W

1559 UT

Sp

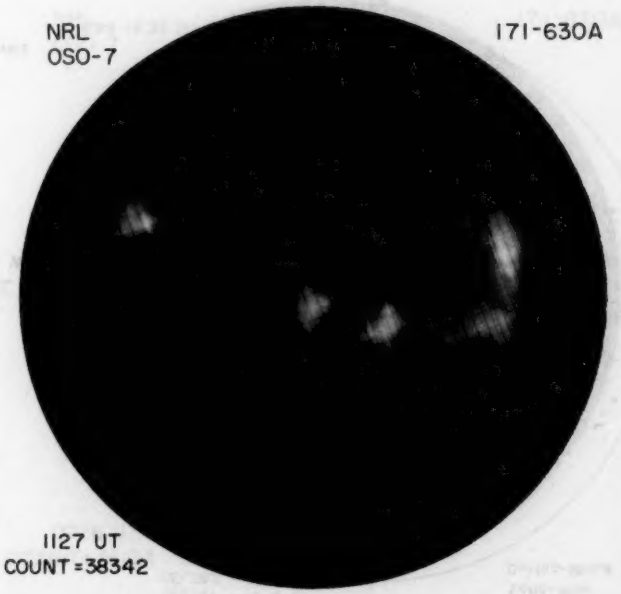
FE XV
284A

COUNT = 51911
ROLL = 67.9°
P-TH = 2.00

Np

NRL
OSO-7

171-630A



E

W

1127 UT
COUNT=38342

Sp

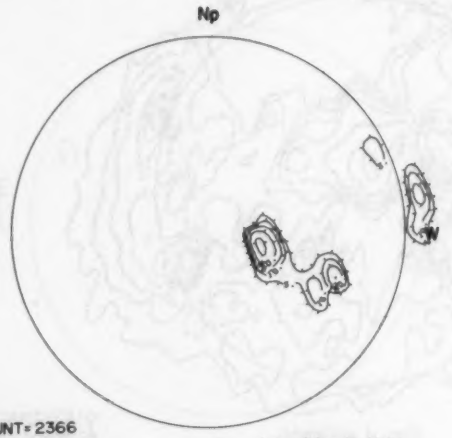
61
Feb 73

FEBRUARY 19, 1973 (P=-18.71, B_o=-7.00, L_o=276.11)

62 Feb 73

NASA GSFC
OSO-7

X-RAY



COUNT=2366
ROLL =66.8°
P-TH = 1.90

0738 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

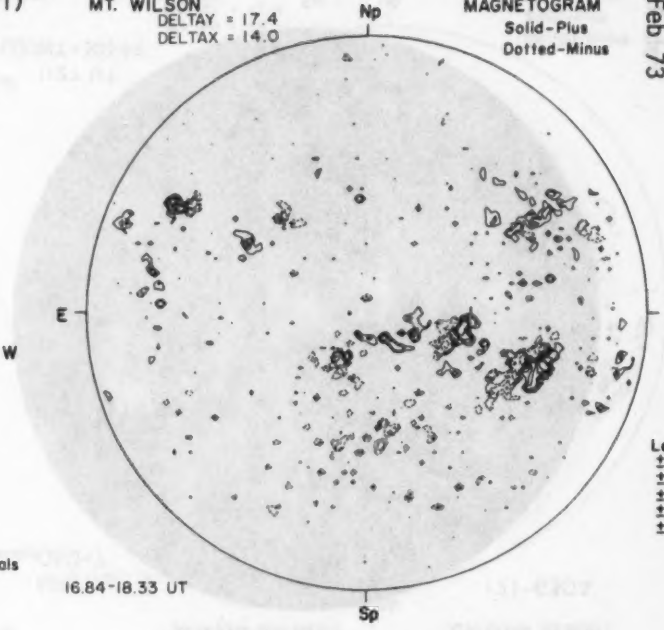
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON
DELTAY = 17.4
DELTAX = 14.0

MAGNETOGRAM
Solid-Plus
Dotted-Minus

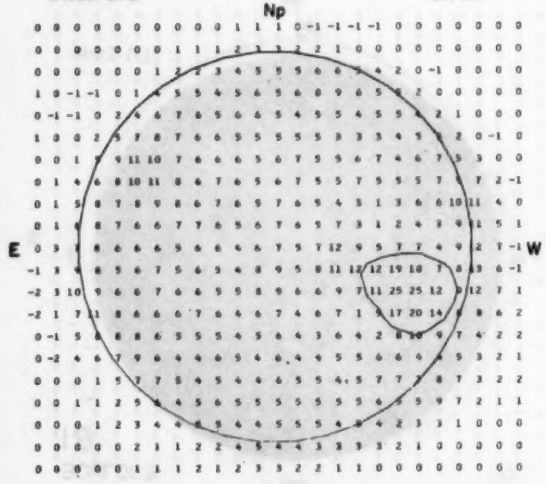


Levels
±5
±10
±20
±40
±80

16.84-18.33 UT

STANFORD

9.1 cm

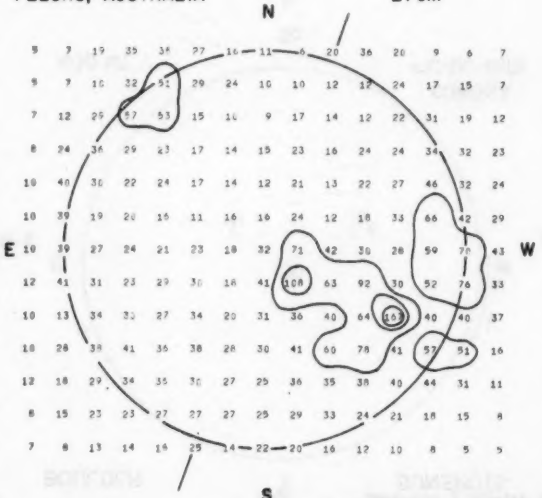


20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm



02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT

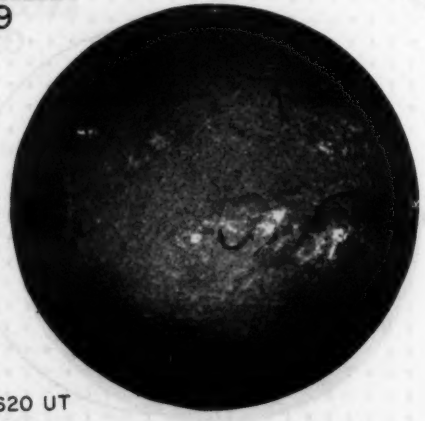
20-21 UT
Brightness Unit 5,000° K

02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

BOULDER
19

Np

Hα



E W

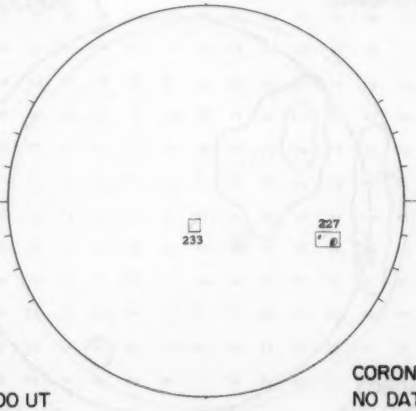
1620 UT

Sp

BOULDER

Np

SUNSPOTS



E W

CORONA
NO DATA

1600 UT

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E W

2106 UT

Sp

NASA GSFC
OSO-7

Np

E W

0730 UT

Sp

FE XV
284A

COUNT = 53628
ROLL = 66.8°
P-TH = 1.90

Np

NRL
OSO-7

171-630A

E W

0726 UT
COUNT = 36104

Sp

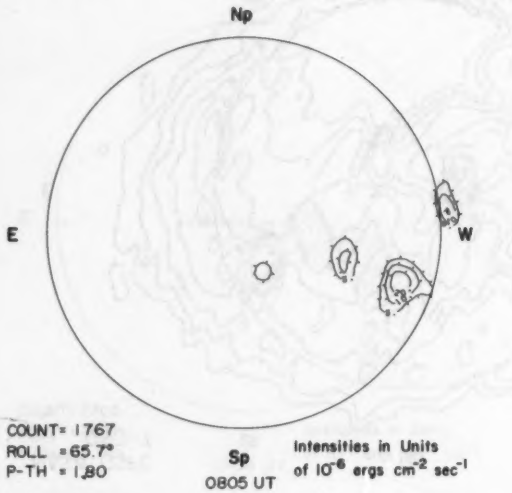
63
Feb 73

FEBRUARY 20, 1973 (P=-19.03, B_o=-7.03, L_o=262.94)

64
Feb 73

NASA GSFC
OSO-7

X-RAY



COUNT= 1767
ROLL =65.7°
P-TH = 1.80

0805 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

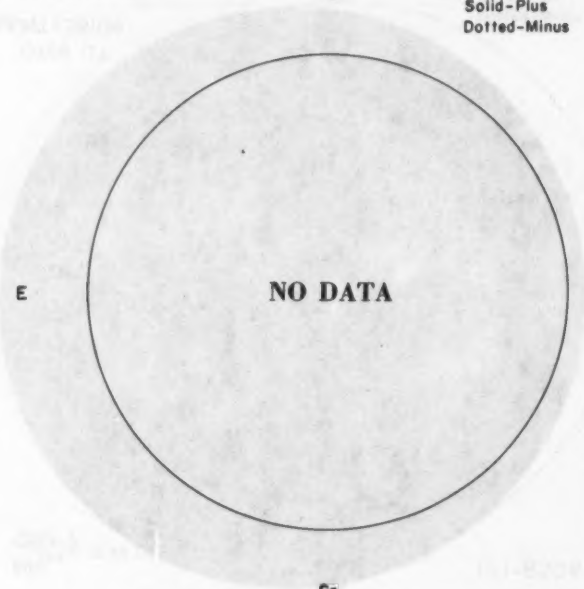
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

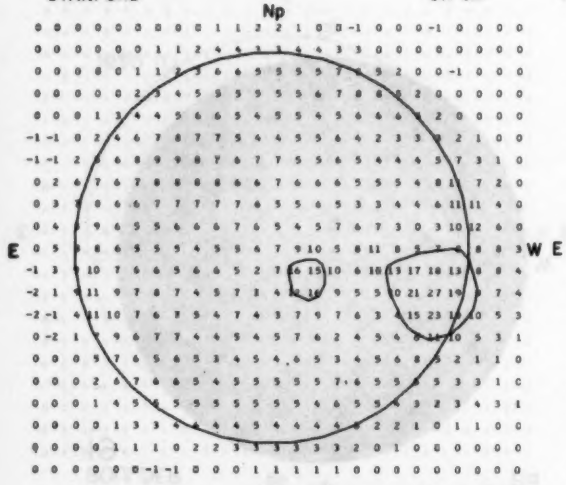
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm

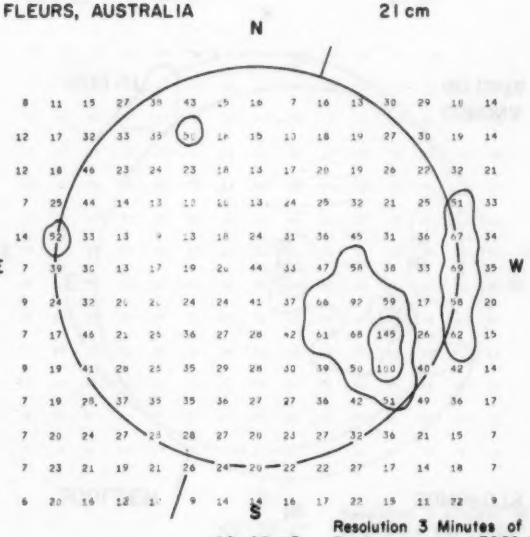


20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

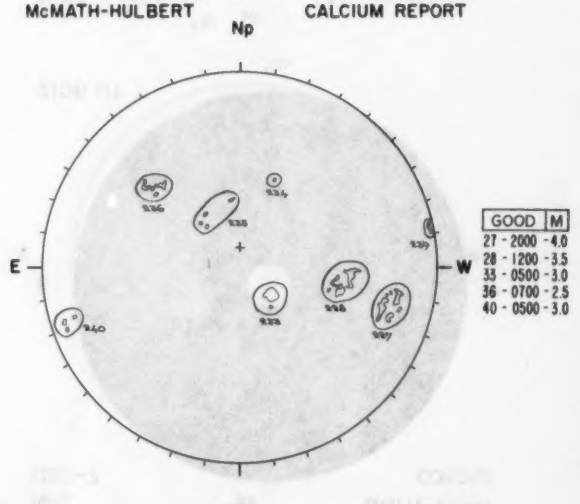


02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



GOOD	M
27 - 2000	- 4.0
28 - 1200	- 3.5
33 - 0500	- 3.0
36 - 0700	- 2.5
40 - 0500	- 3.0

1915 UT

Brightness Unit 5,000° K
20-21 UT

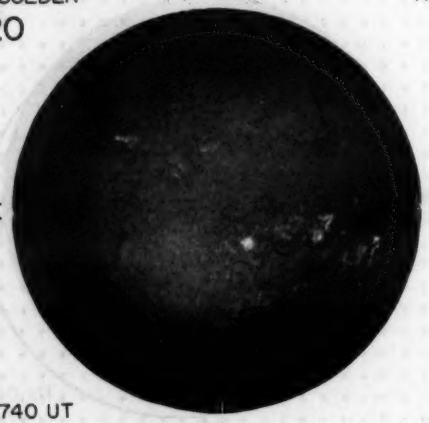
02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

1915 UT

BOULDER
20

Np

Hα



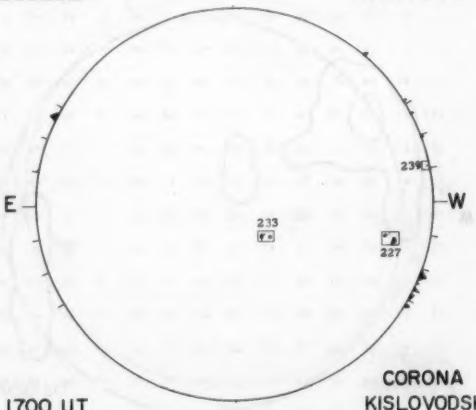
1740 UT

Sp

BOULDER

Np

SUNSPOTS



1700 UT

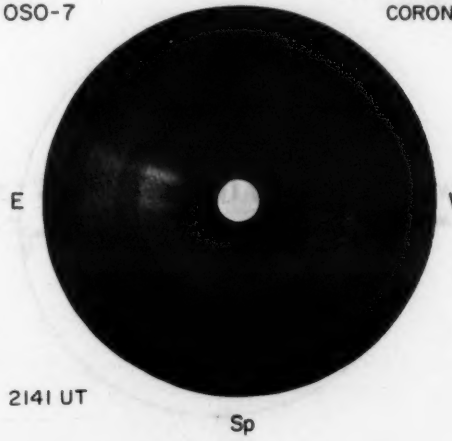
Sp

CORONA
KISLOVODSK
NO DATA W LIMB

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

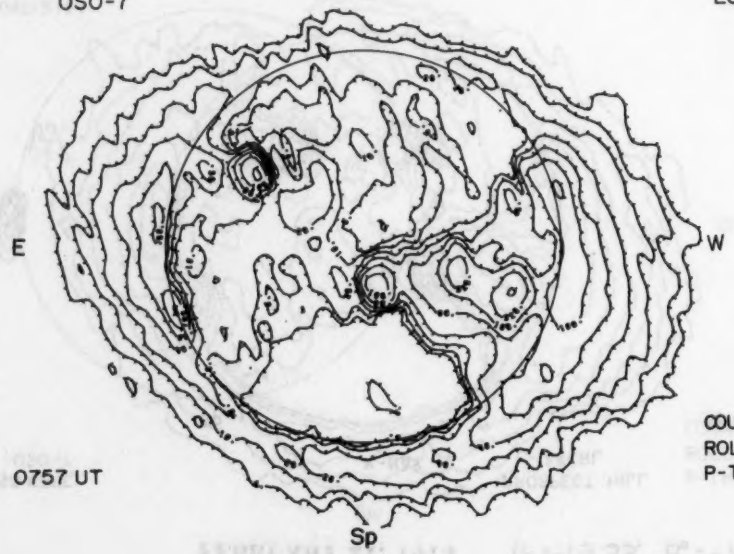


2141 UT

Sp

NASA GSFC
OSO-7

Np



0757 UT

Sp

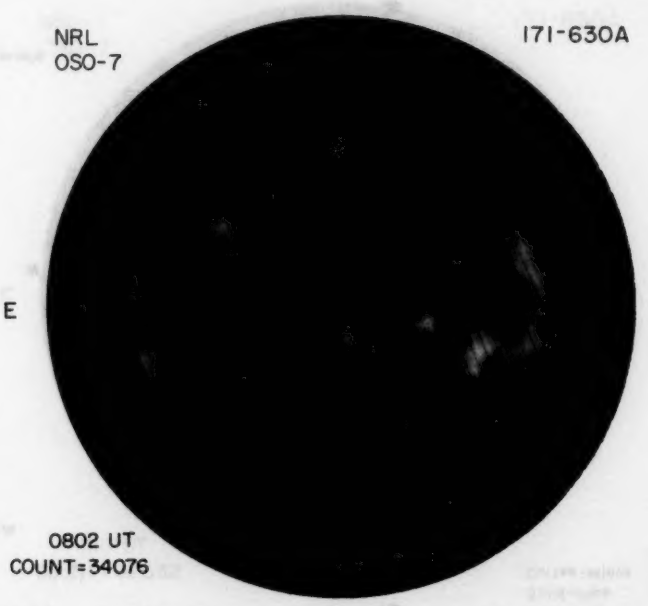
FE XV
284A

COUNT = 49079
ROLL = 65.7°
P-TH = 1.80

NRL
OSO-7

Np

171-630A



0802 UT
COUNT=34076

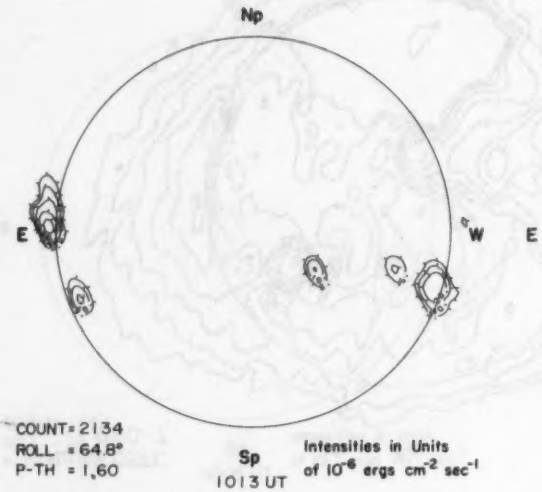
Sp

65
Feb 73

FEBRUARY 21, 1973 (P=-19.33, B_o=-7.06, L_o=249.77)

NASA GSFC
OSO-7

X-RAY



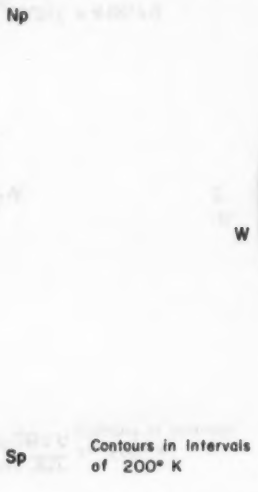
COUNT=2134
ROLL =64.8°
P-TH = 1.60

1013 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL

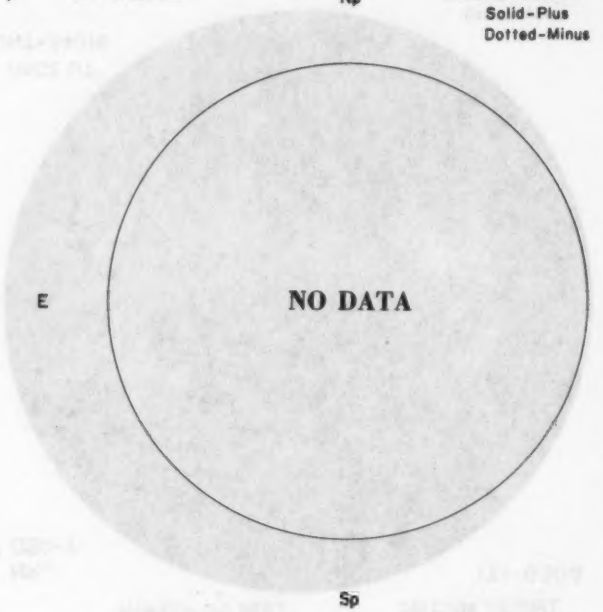
8.6 mm



Contours in Intervals of 200° K

MT. WILSON

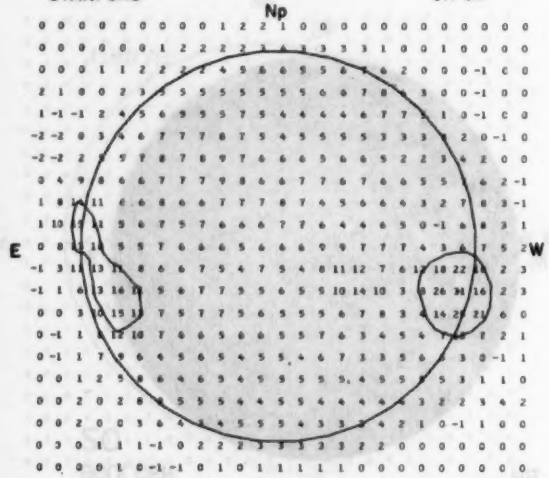
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm

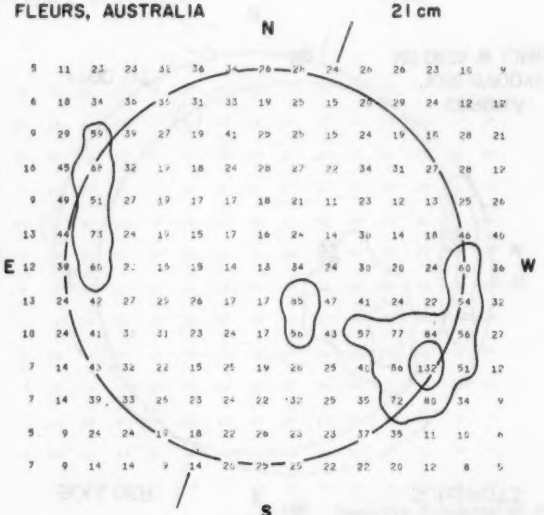


20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

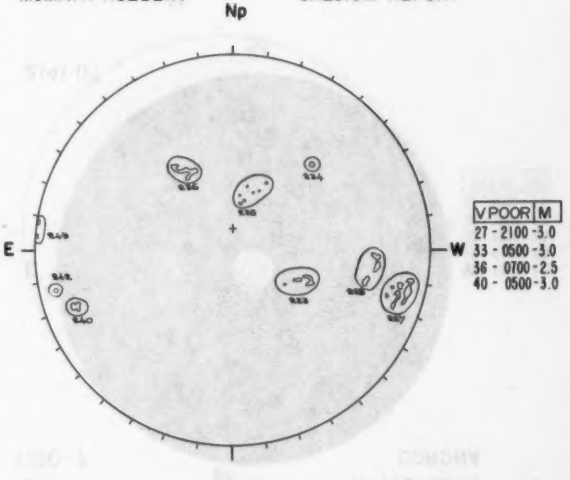


02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

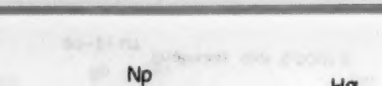
CALCIUM REPORT



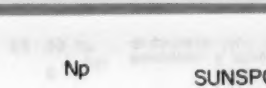
1930 UT

BOULDER

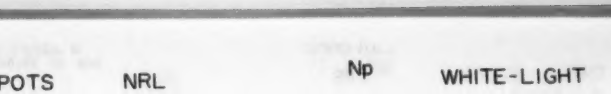
Hα



SUNSPOTS



NRL



WHITE-LIGHT

20-21 UT

Brightness Unit 5,000° K

02-03 UT

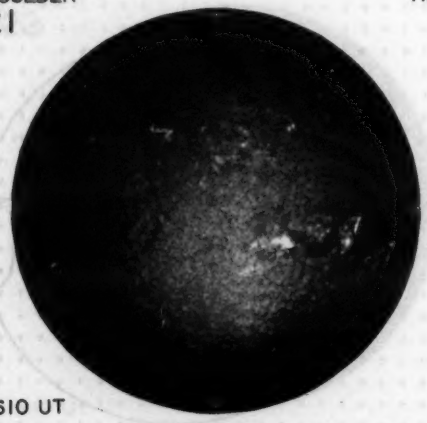
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

1930 UT

BOULDER
21

Np

Hα



E

W

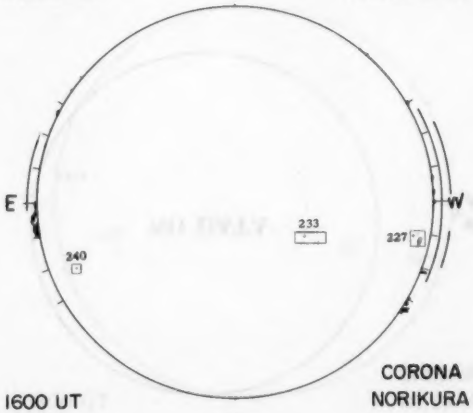
1610 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

CORONA
NORIKURA

1600 UT

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

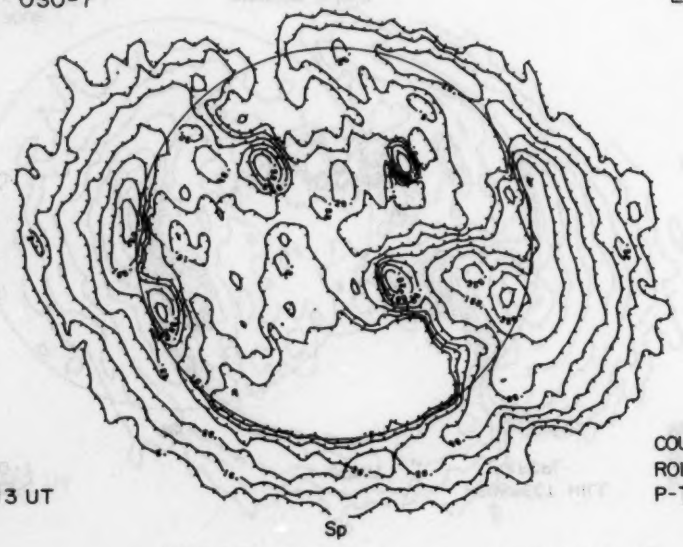
NO DATA

W

Sp

NASA GSFC
OSO-7

Np



E

W

1013 UT

Sp

FE XV
284A

COUNT = 49984
ROLL = 64.8°
P-TH. = 1.60

Np

NRL
OSO-7

171-630A

E

W

1010 UT
COUNT = 32582

Sp

67
Feb 73

FEBRUARY 22, 1973 (P=-19.63, B_o=-7.09, L_o=236.60)

68 Feb 73

NASA GSFC
OSO-7

X-RAY

Np

E W E

Sp

COUNT = 3008
ROLL = 64.0°
P-TH = 1.50

0728 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL

8.6 mm

Np

E W

Sp

Contours in Intervals of 200° K

MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus

Np

E W

NO DATA

Sp

Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm

Np

E W E

Sp

20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

N

E W

NO DATA

S

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT

Np

E W

Sp

2000 UT

BAD	M
27 - 1500	2.5
33 - 0700	3.0
36 - 0400	2.5
40 - 0700	3.0
46 - 0900	2.5

Np

BOULDER

SUNSPOTS

NRL

Np

WHITE-LIGHT

20-21 UT

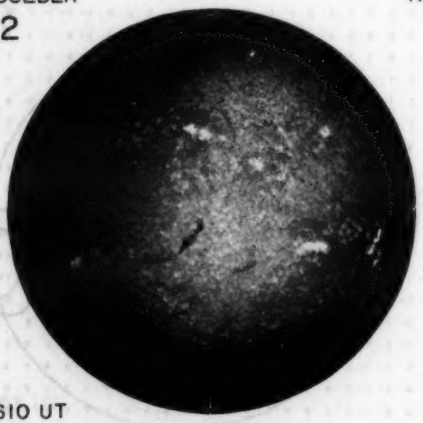
02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

2000 UT

BOULDER
22

Np

Hα



E

W

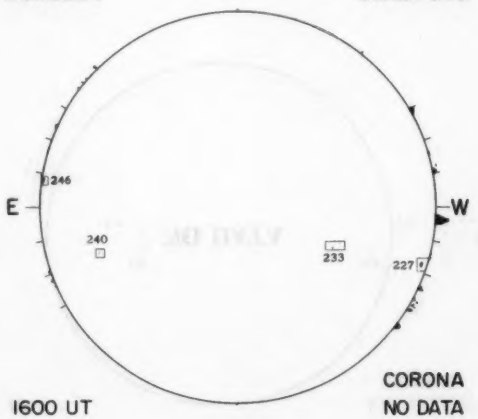
1610 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

CORONA
NO DATA

1600 UT

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

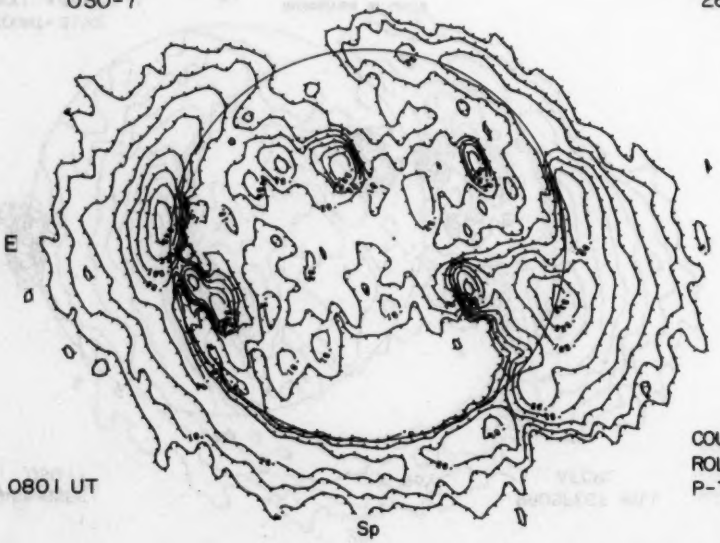
W

0122 UT

Sp

NASA GSFC
OSO-7

Np



E

W

0801 UT

Sp

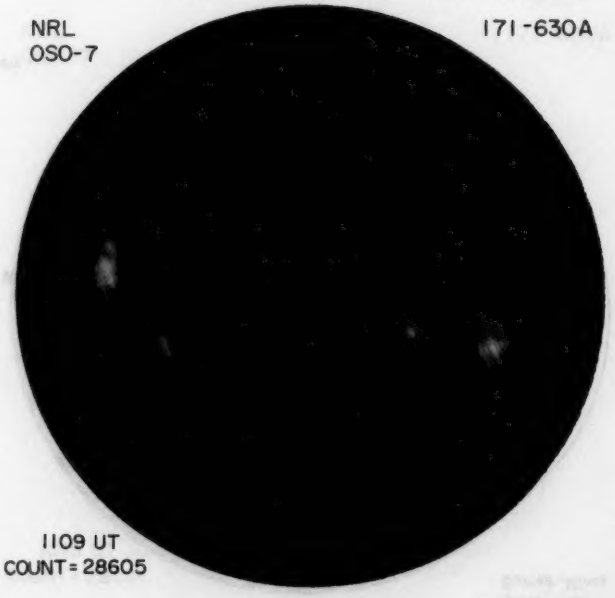
FE XV
284A

COUNT = 51161
ROLL = 64.0°
P-TH = 1.50

Np

NRL
OSO-7

171-630A



E

W

1109 UT
COUNT = 28605

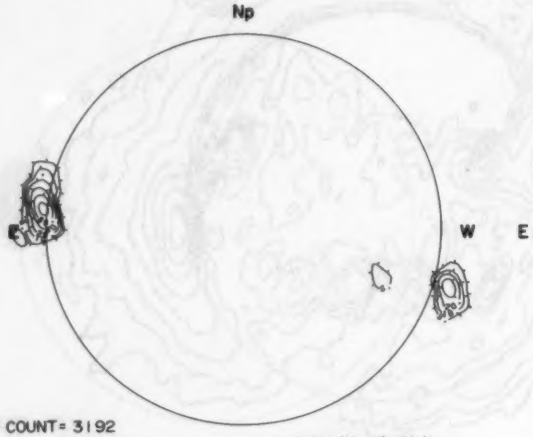
Sp

69
Feb 73

FEBRUARY 23, 1973 (P=-19.92, B_o=-7.11, L_o=223.43)

NASA GSFC
OSO-7

X-RAY



COUNT= 3192
ROLL = 64.0°
P-TH = 1.40

0524 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

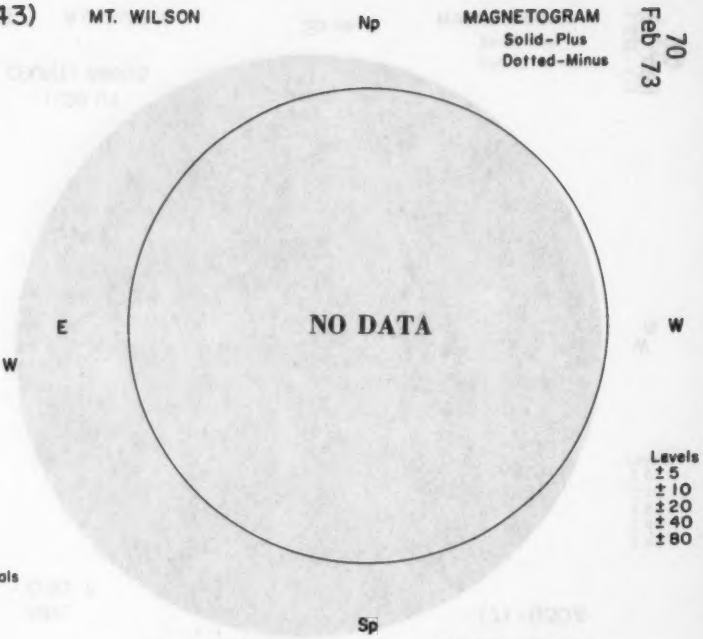
PROSPECT HILL
AFCRL

8.6 mm

Contours in Intervals of 200° K

MT. WILSON

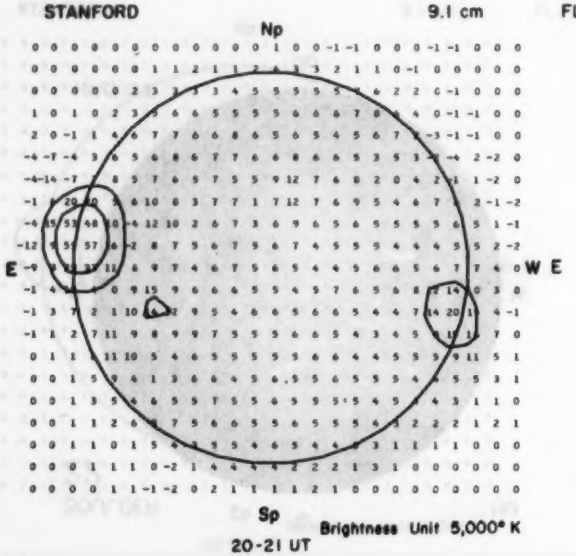
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm

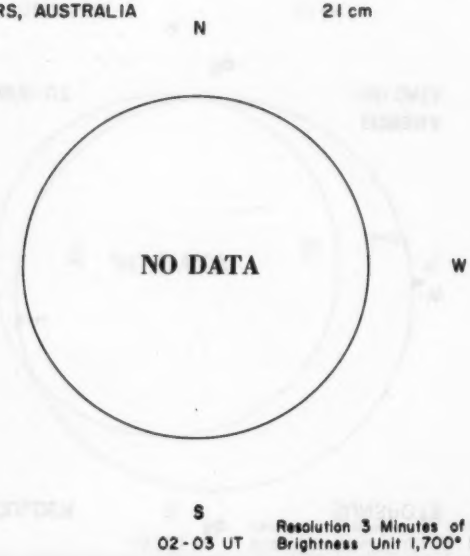


20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

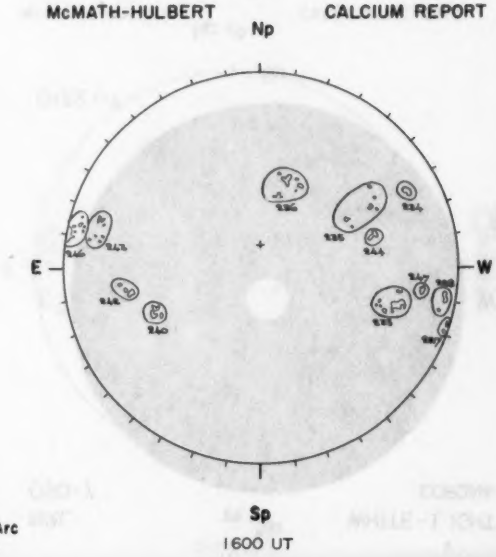


02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



POOR	D
33-1000	-2.5
36-0600	-2.5
40-0500	-2.5
42-0300	-3.0
46-1600	-3.0
47-0300	-2.5

1600 UT

BOULDER

Np

Hα

BOULDER

Np

SUNSPOTS

NRL

Np

WHITE-LIGHT

20-21 UT

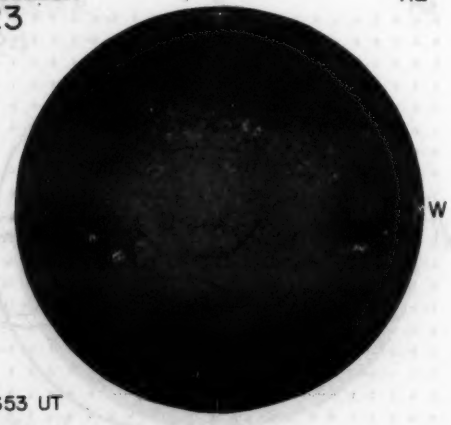
02-03 UT Brightness Unit 1,700° K

1600 UT

BOULDER
23

Np

Hα



E

W

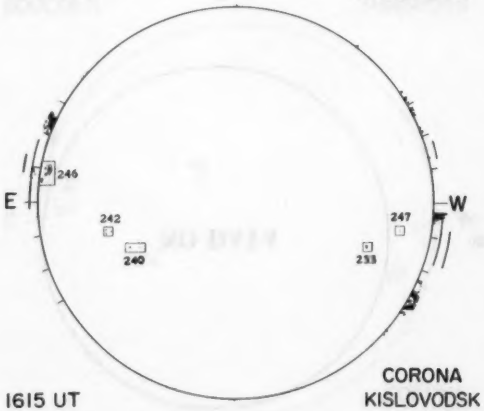
1653 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1615 UT

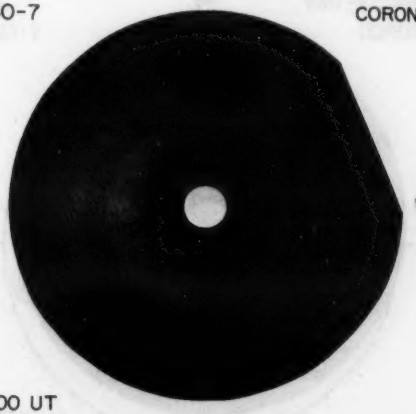
CORONA
KISLOVODSK

Sp

NRL
OSO-7

Np

WHITE - LIGHT
CORONA



E

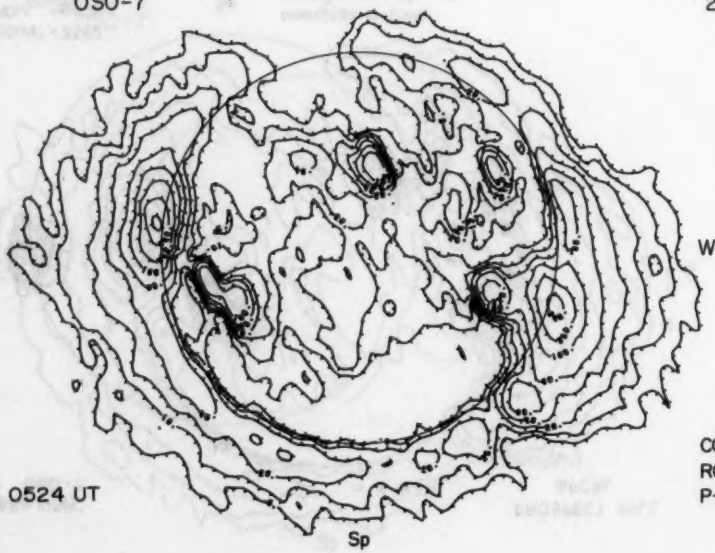
W

1600 UT

Sp

NASA GSFC
OSO-7

Np



E

W

0524 UT

Sp

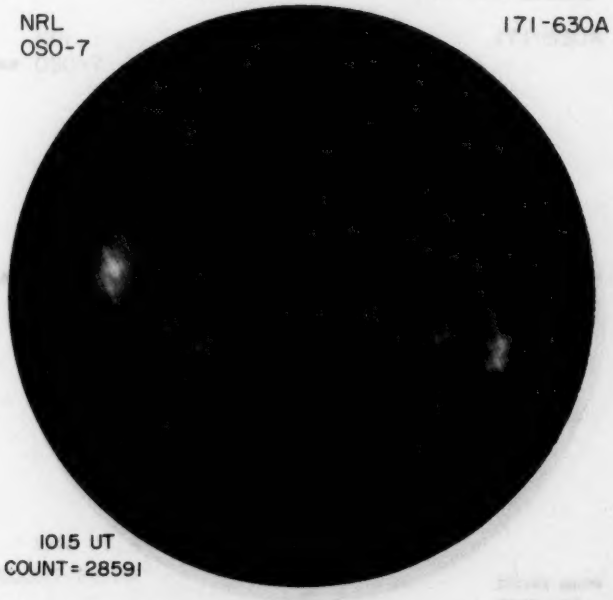
FE XV
284A

COUNT = 50627
ROLL = 64.0°
P-TH = 1.40

NRL
OSO-7

Np

171-630A



E

W

1015 UT
COUNT = 28591

Sp

71
Feb 73

FEBRUARY 24, 1973 (P=-20.21, B_o=-7.14, L_o=210.26)

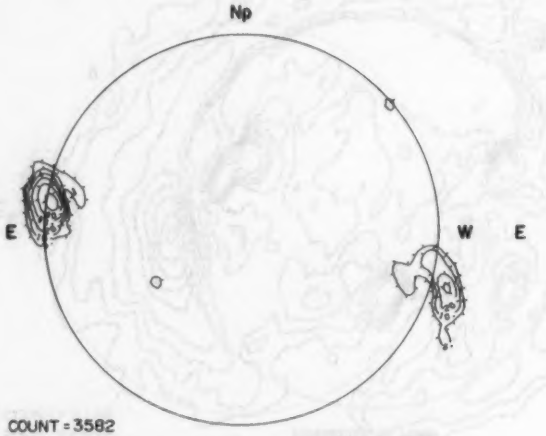
MT. WILSON

MAGNETOGRAM
Solid-Plus
Dotted-Minus

Feb 73 72

NASA GSFC
OSO-7

X-RAY



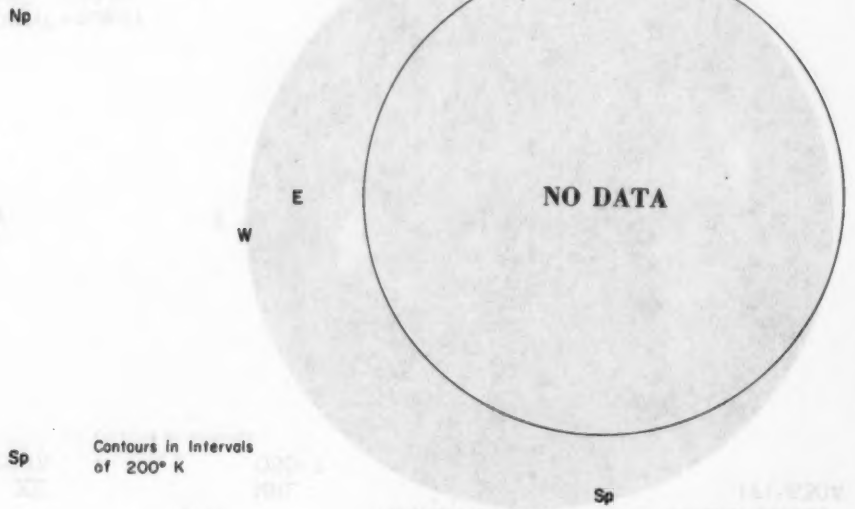
COUNT = 3582
ROLL = 64.2°
P-TH = 1.20

0131 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL

8.6 mm

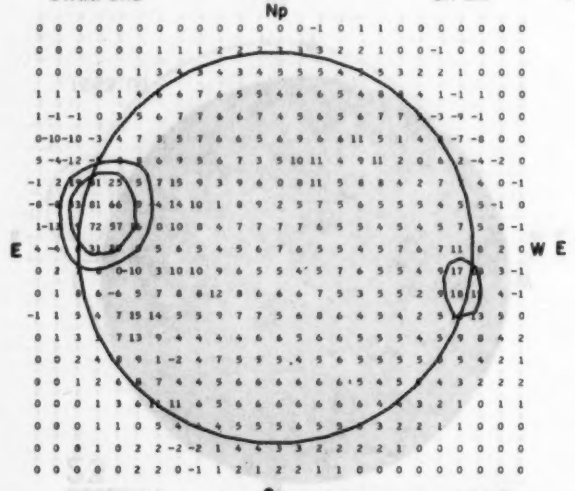


Contours in Intervals of 200° K

Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

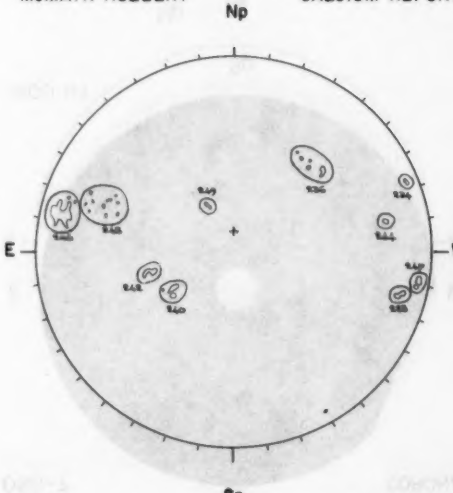
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCULUM REPORT



FAIR	S
33 - 0600	-2.5
42 - 0500	-2.5
46 - 2500	-3.0
47 - 0600	-3.0
49 - 0100	-2.5

1800 UT

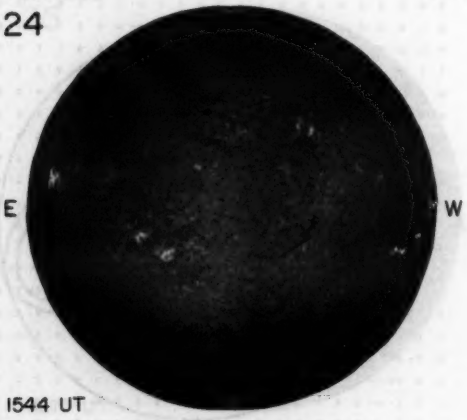
20-21 UT

02-03 UT Brightness Unit 1,700° K

1800 UT

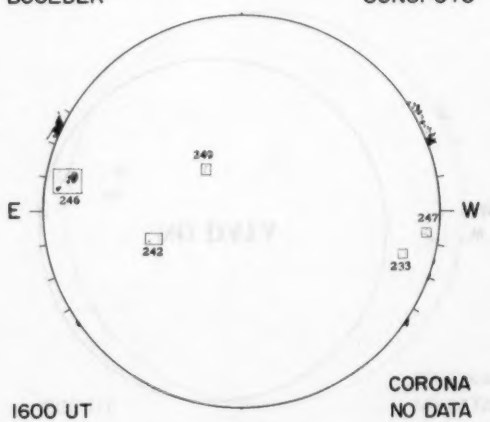
BOULDER Np Hα

24



1544 UT

BOULDER Np SUNSPOTS



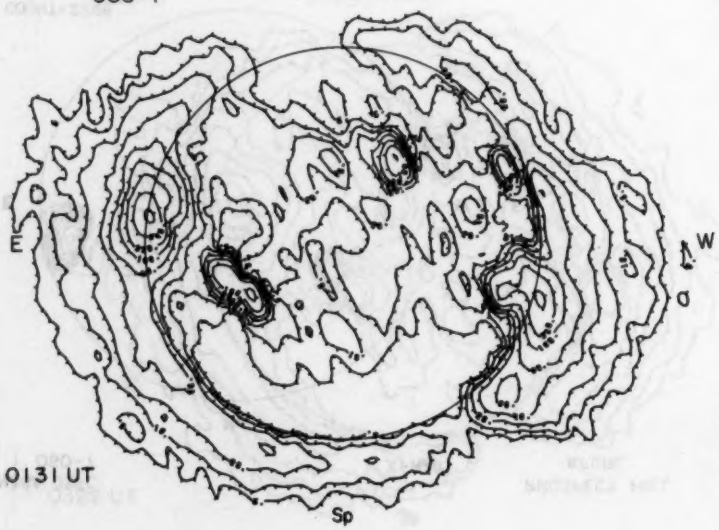
1600 UT

CORONA
NO DATA

NRL Np WHITE-LIGHT
OSO-7 CORONA

2059 UT

NASA GSFC Np
OSO-7



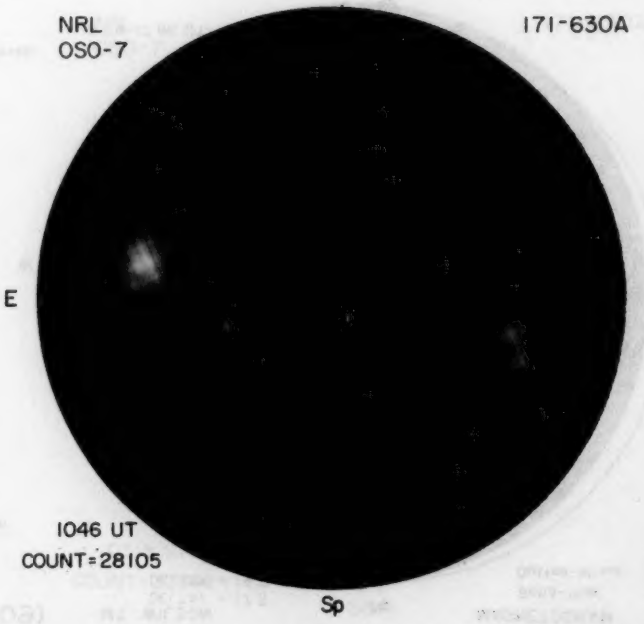
0131 UT

FE XV
284A

COUNT = 46018
ROLL = 64.2°
P-TH = 1.20

Np

NRL 171-630A
OSO-7



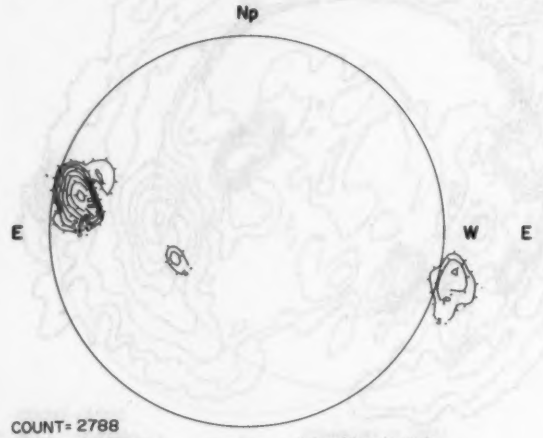
1046 UT
COUNT=28105

73
Feb 73

FEBRUARY 25, 1973 (P=-20.49, B_o=-7.16, L_o=197.09)

74 Feb 73

NASA GSFC
OSO-7
X-RAY



COUNT= 2788
ROLL = 64.6°
P-TH = 1.15

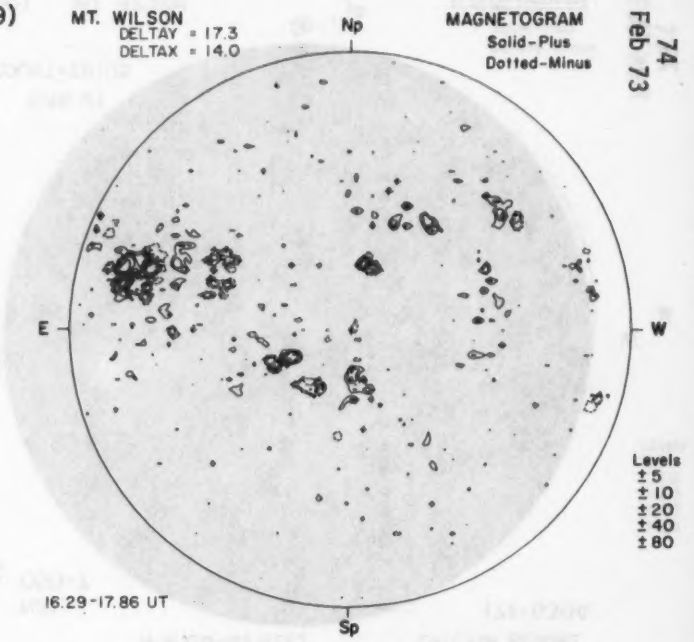
0322 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL
8.6 mm

Contours in Intervals of 200° K

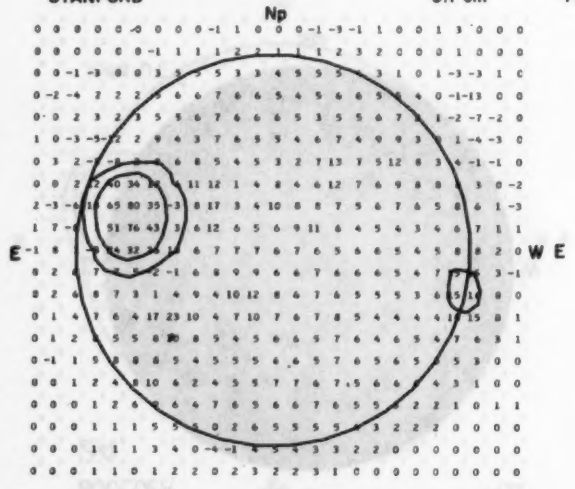
MT. WILSON
DELTAY = 17.3
DELTAX = 14.0
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

16.29-17.86 UT

STANFORD
9.1 cm



20-21 UT

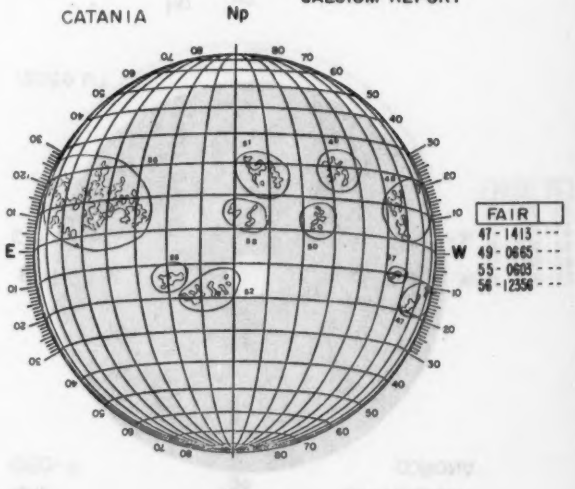
Brightness Unit 5,000° K

FLEURS, AUSTRALIA
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

CATANIA
CALCIUM REPORT



0835 UT

20-21 UT

02-03 UT Brightness Unit 1,700° K

0835 UT

BOULDER
25

Np

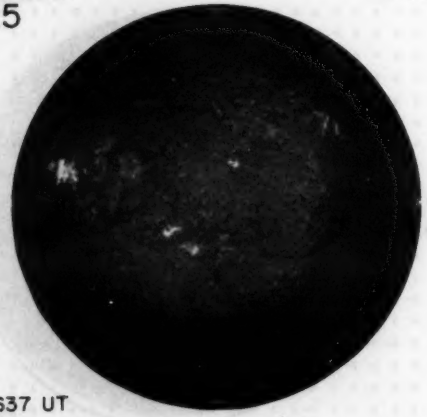
Hα

E

W

Sp

1637 UT



BOULDER

Np

SUNSPOTS

249

246

247

E

W

Sp

1600 UT

CORONA
NO DATA

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

W

Sp

2136 UT

NASA GSFC
OSO-7

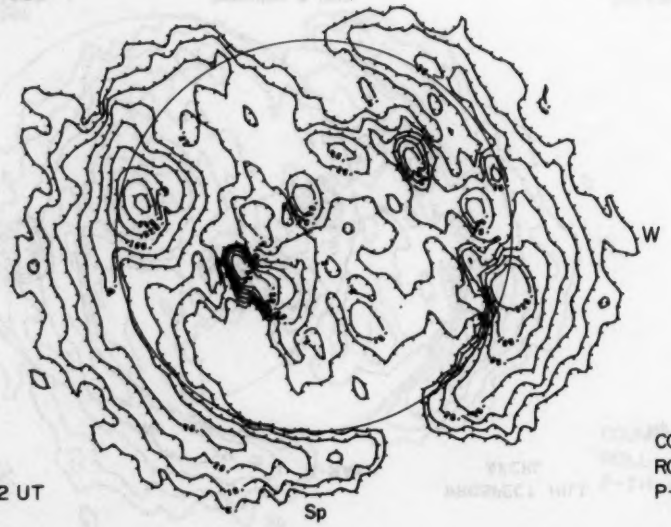
Np

E

W

Sp

0322 UT



FE XV
284A

COUNT = 46220
ROLL = 64.6°
P-TH = 1.15

NRL
OSO-7

Np

171-630A

Sp

0318 UT
COUNT = 30544

75
Feb 73

FEBRUARY 26, 1973 (P=-20.77, B_o=-7.18, L_o=183.92)

MT. WILSON

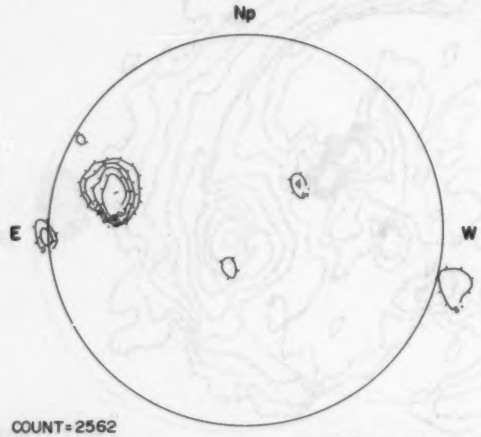
Np

MAGNETOGRAM
Solid-Plus
Dotted-Minus

Feb 73 76

NASA GSFC
OSO-7

X-RAY



COUNT=2562
ROLL =65.4°
P-TH = 1.00

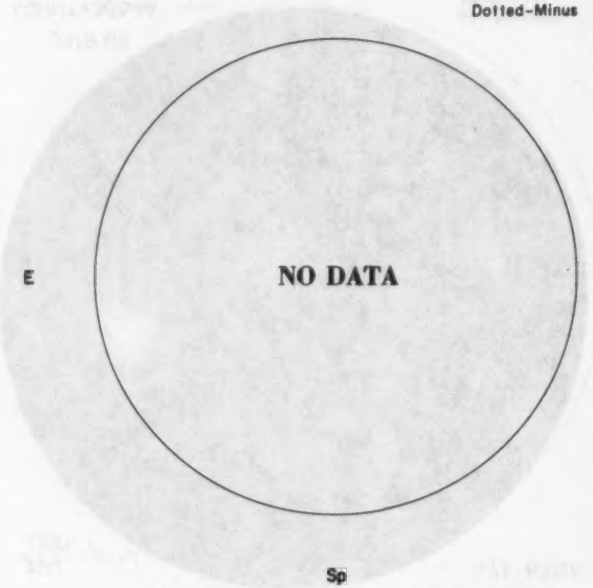
0834 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL

8.6 mm

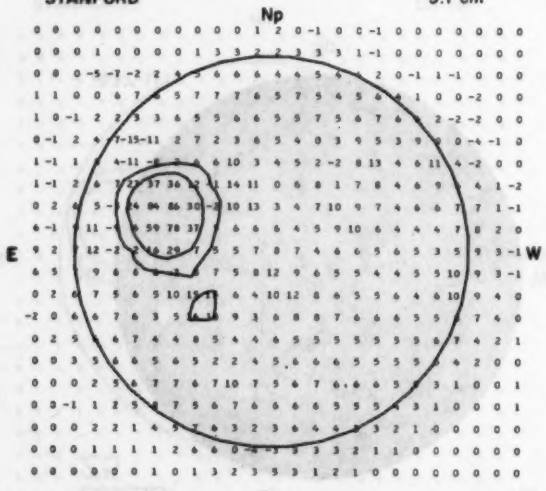
Contours in Intervals of 200° K



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm

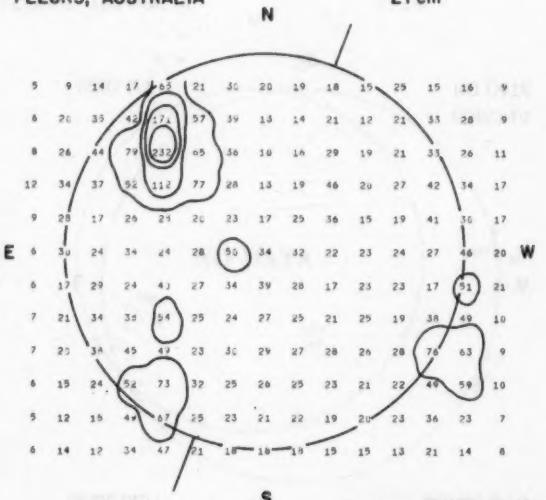


20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

21 cm

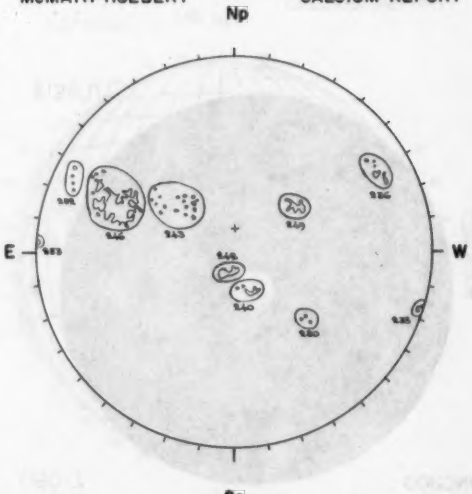


02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



FAIR	M
42 - 0600	-3.0
46 - 3700	-4.0
49 - 0700	-3.5

1515 UT

20-21 UT

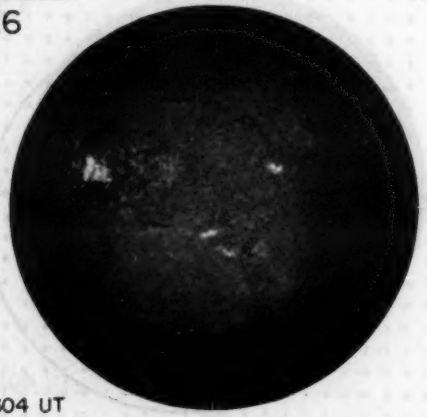
02-03 UT Brightness Unit 1,700° K

1515 UT

BOULDER
26

Np

Hα



E W

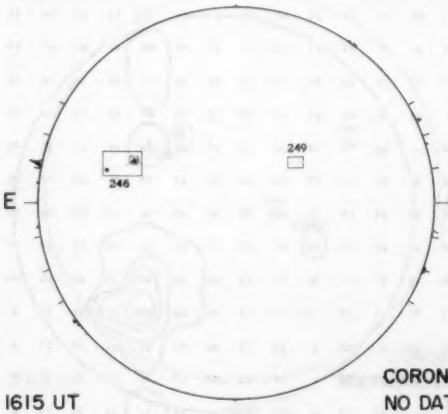
Sp

1604 UT

BOULDER

Np

SUNSPOTS



E W

Sp

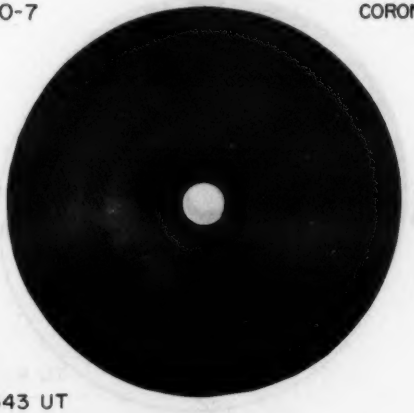
CORONA
NO DATA

1615 UT

NRL
OSO-7

Np

WHITE-LIGHT
CORONA



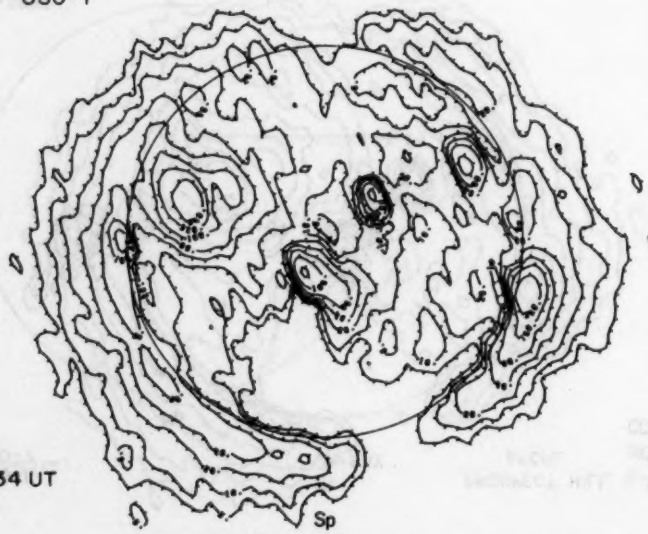
E W

Sp

2343 UT

NASA GSFC
OSO-7

Np



E W

Sp

0834 UT

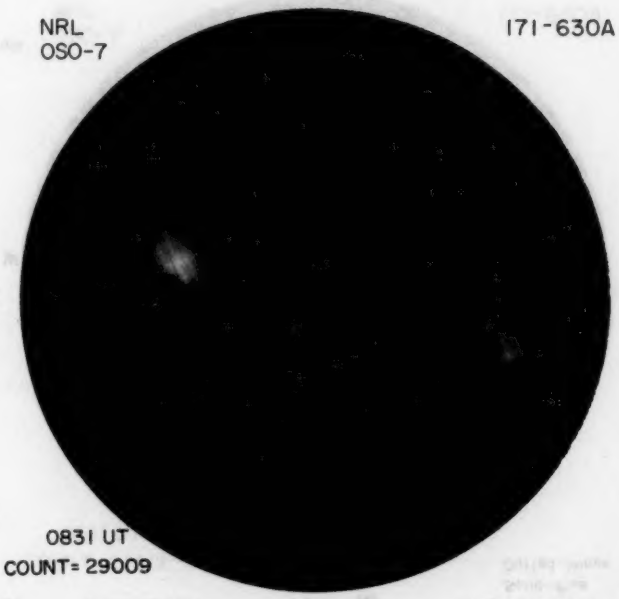
FE XV
284A

COUNT = 46122
ROLL = 65.4°
P-TH = 1.00

Np

NRL
OSO-7

171-630A



E W

Sp

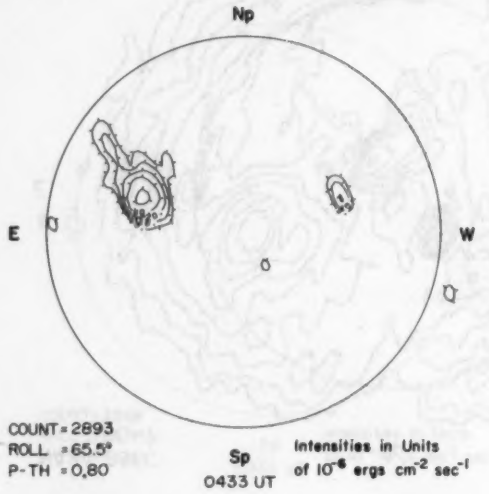
0831 UT
COUNT= 29009

77
Feb 73

FEBRUARY 27, 1973 (P=-21.03, B_o=-7.19, L_o=170.75)

78 Feb 73

NASA GSFC
OSO-7
X-RAY

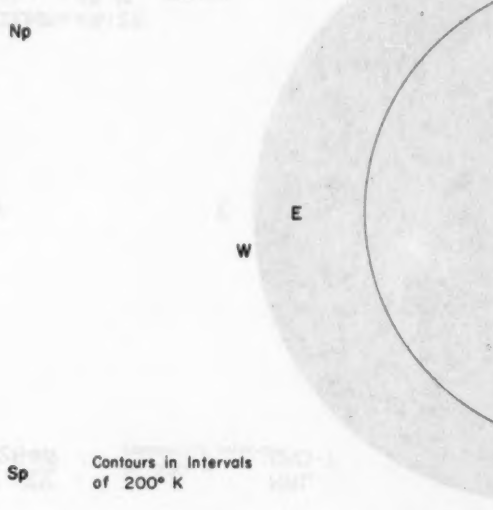


COUNT = 2893
ROLL = 65.5°
P-TH = 0.80

0433 UT

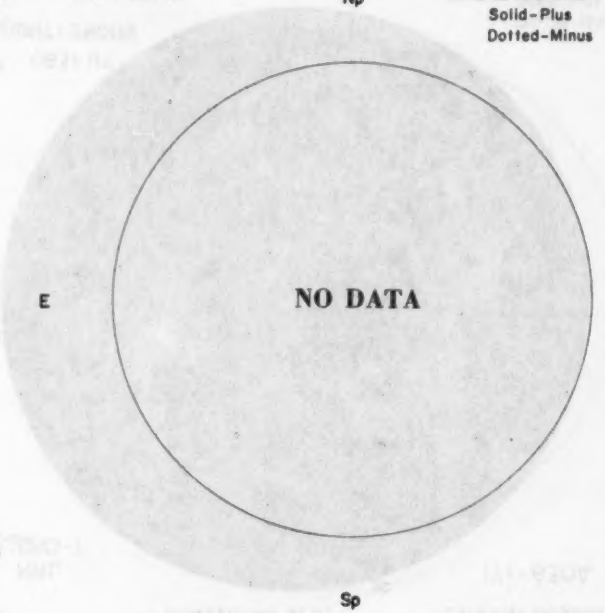
Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL
8.6 mm



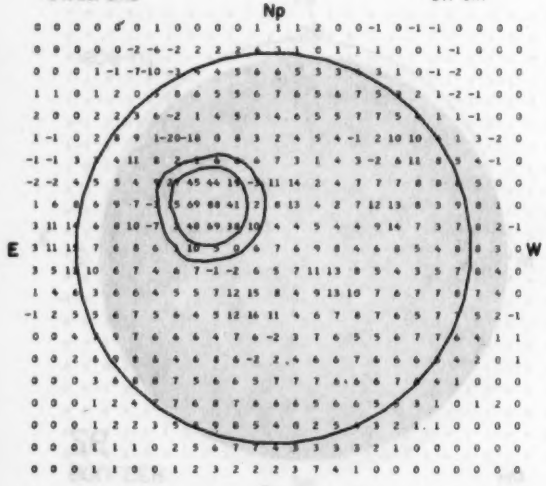
Contours in Intervals of 200° K

MT. WILSON
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

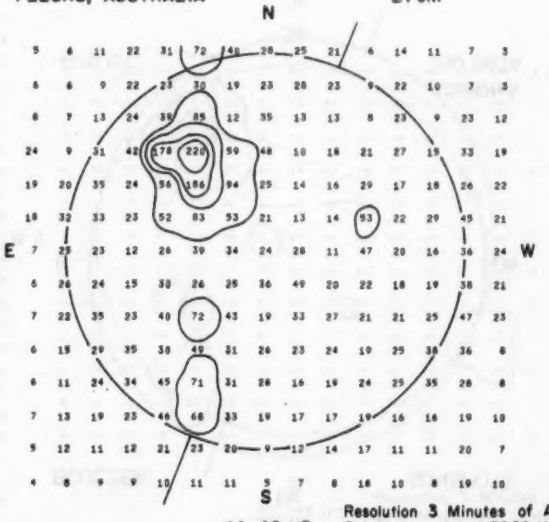
STANFORD
9.1 cm



20-21 UT

Brightness Unit 5,000° K

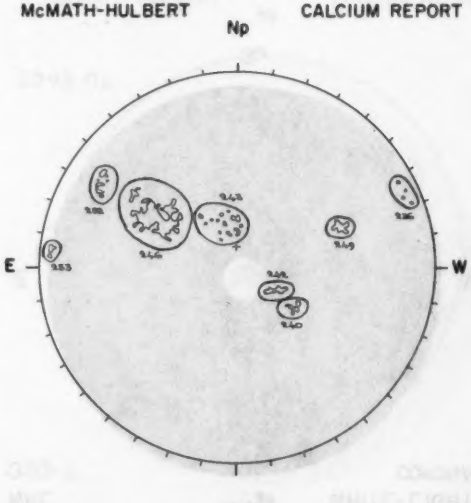
FLEURS, AUSTRALIA
21 cm



02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT
CALCIUM REPORT



1430 UT

FAIR	M
42 - 0600 - 3.0	
46 - 3700 - 3.5	
49 - 0700 - 3.5	

20-21 UT

02-03 UT Brightness Unit 1,700° K

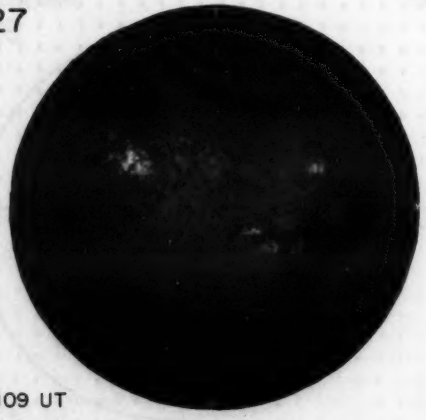
1430 UT

BOULDER

27

Np

Hα



E

W

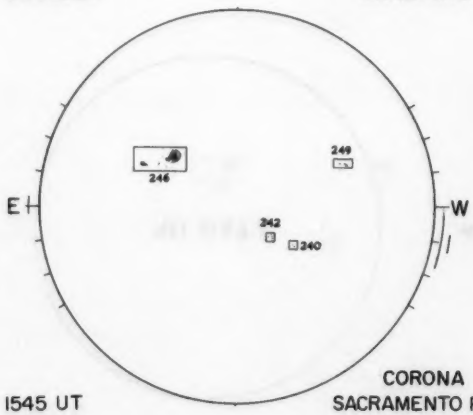
1109 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1545 UT

Sp

CORONA

SACRAMENTO PEAK

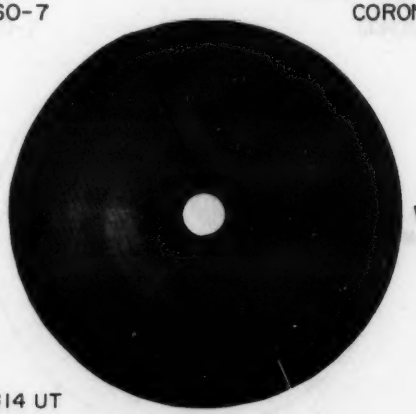
NRL

OSO-7

Np

WHITE-LIGHT

CORONA



E

W

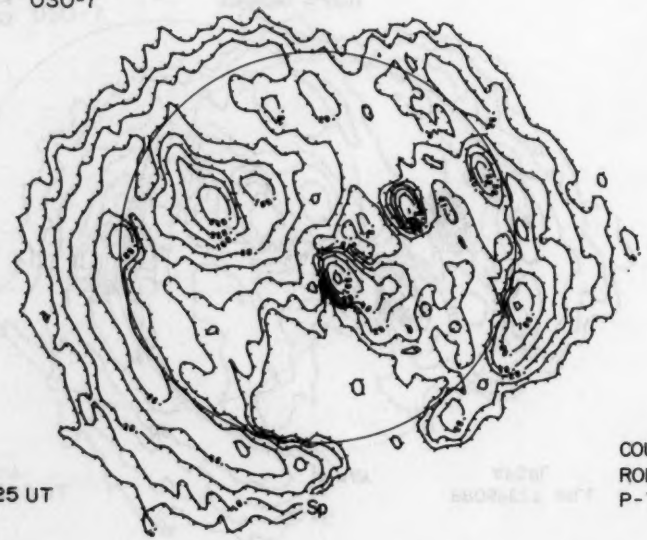
2114 UT

Sp

NASA GSFC

OSO-7

Np



E

W

0425 UT

Sp

FE XV

284A

COUNT = 48493

ROLL = 65.5°

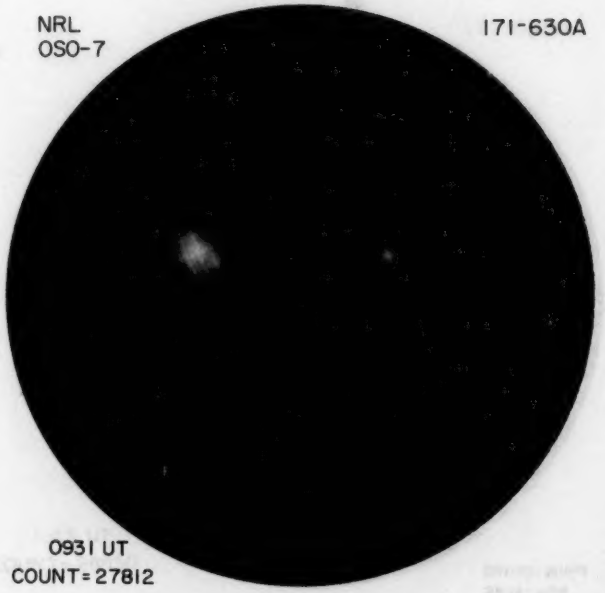
P-TH = 0.80

Np

NRL

OSO-7

171-630A



E

W

0931 UT

COUNT=27812

Sp

79

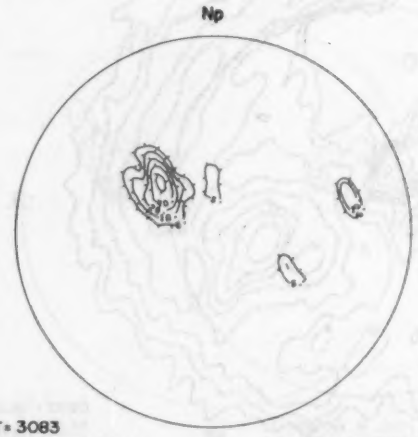
Feb 73

FEBRUARY 28, 1973 (P=-21.30, B_o=-7.21, L_o=157.58)

Feb 73 80

NASA GSFC
OSO-7

X-RAY



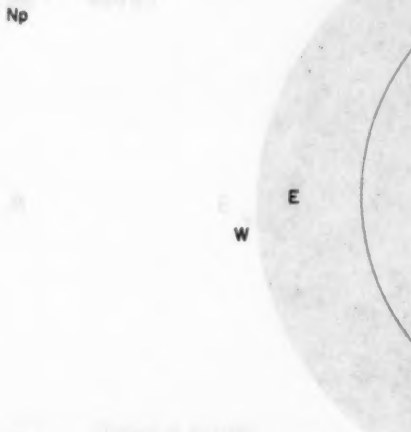
COUNT = 3083
ROLL = 66.2°
P-TH = 0.75,

0509 UT

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

PROSPECT HILL
AFCRL

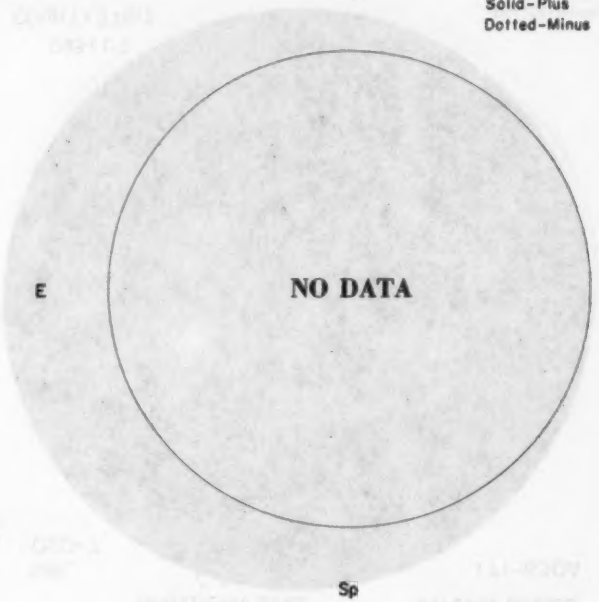
8.6 mm



Contours in Intervals of 200° K

MT. WILSON

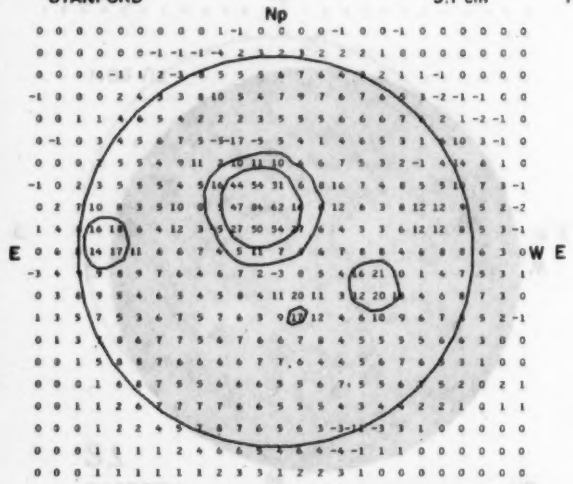
MAGNETOGRAM
Solid-Plus
Dotted-Minus



Levels
±5
±10
±20
±40
±80

STANFORD

9.1 cm



20-21 UT

Brightness Unit 5,000° K

FLEURS, AUSTRALIA

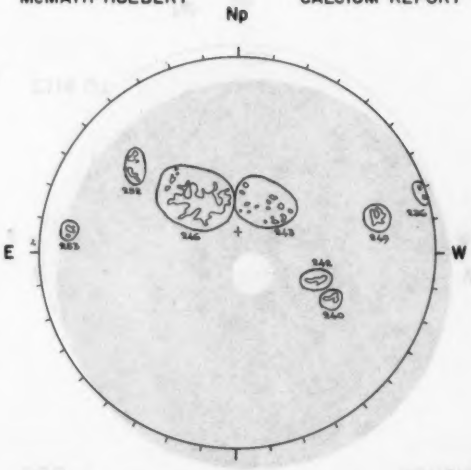
21 cm

02-03 UT

Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

McMATH-HULBERT

CALCIUM REPORT



FAIR	M
40 - 0400 - 2.5	
42 - 0600 - 3.0	
46 - 3800 - 3.5	
49 - 0800 - 3.0	

1445 UT

Brightness Unit 5,000° K
20-21 UT

02-03 UT
Resolution 3 Minutes of Arc
Brightness Unit 1,700° K

1445 UT

BOULDER
28

Np

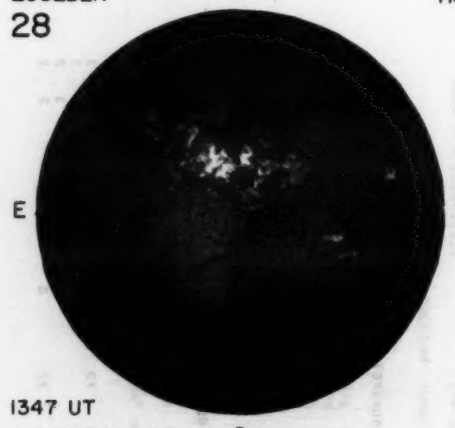
Hα

E

W

1347 UT

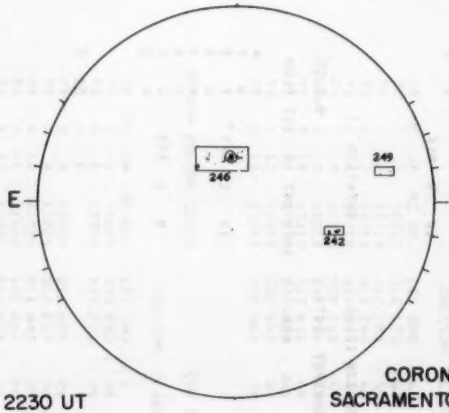
Sp



BOULDER

Np

SUNSPOTS



E

W

2230 UT

Sp

CORONA
SACRAMENTO PEAK

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

E

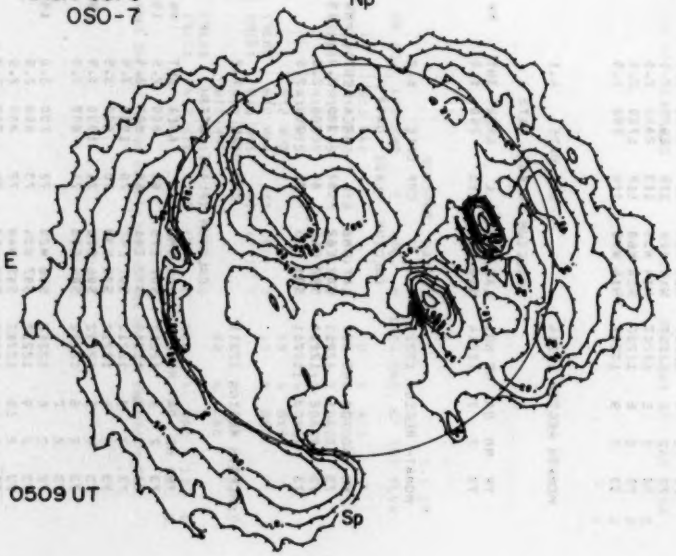
W

1845 UT

Sp

NASA GSFC
OSO-7

Np



E

W

0509 UT

Sp

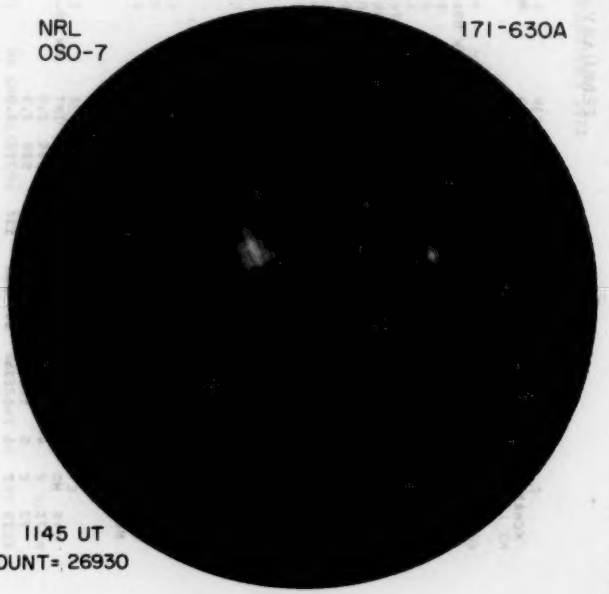
FE XV
284A

COUNT = 49345
ROLL = 66.2°
P-TH = 0.75

Np

NRL
OSO-7

171-630A



E

W

1145 UT
COUNT= 26930

Sp

81
Feb 73

REGIONS OF SOLAR ACTIVITY

FEBRUARY 1973

MCMATH REGION 12205 CMP DATE 1.3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	1	25	12205	N10 E85	151	700	1.0
73	1	26	12205	N10 E77	146	1400	2.0
73	1	27	12205	N11 E68	149	1600	3.0
73	1	28					
73	1	29	12205	N10 E36	148	2000	3.0
73	1	30	12205	N10 E23	147	2400	3.0
73	1	31	12205	N08 E09	146	2400	3.5
73	2	1	12205	N08 W04	148	2000	3.0
73	2						
73	2						
73	2	2	12205	N08 W19	149	1600	2.5
73	2	3	12205	N08 W30	147	2000	2.5
73	2	4	12205	N07 W42	145	2000	2.5
73	2	5	12205	N07 W55	146	1800	2.0
73	2	6	12205	N07 W65	142	1200	2.0
73	2	7					
73	2	8	12205	N07 W86	138	700	2.0

RETURN OF REGION 12160 ROTATION 2

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
								7	4
								9	5
								10	5
19097	N12 E46	149	A	0					
19100	N05 E29	153	(A)	2				5	2
19100	N06 E12	153	(A)	2	10	3	AXX	4	2
19100	N06 E00	154	A	0	0	2	AXX	5	2
19102	N10 W26	166	B	0				5	2
19100	N10 W12	152	A	0					
19103	N09 W04	144	A	0	10	2	BXO		
								4	2
								4	2
								4	2
								5	3
								7	3
								7	3

MCMATH REGION 12216 CMP DATE 2.2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	4	12216	S04 W34	137	200	2.0
73	2	5	12216	S04 W46	137	500	2.5
73	2	6	12216	S04 W60	137	300	2.0

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
								4	2
	S06 W45				10	3	BXO		

MCMATH REGION 12207 CMP DATE 3.4

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	1	27	12207	N13 E89	120	600	1.5
73	1	28					
73	1	29	12207	N13 E62	122	1500	2.0
73	1	30	12207	N13 E48	122	2200	2.5
73	1	31	12207	N12 E32	123	2400	3.0
73	2	1	12207	N12 E22	122	2400	3.0
73	2	2	12207	N12 E10	120	2400	2.5
73	2	3	12207	N13 W02	119	2500	2.5
73	2	4	12207	N14 W14	117	2800	2.5
73	2	5	12207	N14 W24	115	2400	2.5
73	2	6	12207	N14 W35	113	2800	2.5
73	2	8	12207	N14 W60	112	1700	2.0
73	2	9	12207	N14 W75	114	700	1.5

RETURN OF REGION 12164 ROTATION 3

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
								8	4
								9	5
	N13 E45				10	1	AXX	7	3
								5	3
								6	3
								5	3
	N16 E86				0	1	AXX	4	2
								4	2
								5	2

MCMATH REGION 12214 CMP DATE 4.1

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	3	12214	S10 E06	111	200	1.0

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX

MCMATH REGION 12211 CMP DATE 6.2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	1	12211	S02 E62	82	300	2.0
73	2	2	12211	S02 E46	84	300	2.0
73	2	3	12211	S01 E33	84	300	2.0

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
19104	N08 E55	85		0	10	2	BXO		

MCMATH REGION 12212 CMP DATE 7.2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	1	12212	S07 E75	69	800	2.5
73	2	2	12212	S07 E61	69	800	3.5
73	2	3	12212	S07 E47	70	1000	3.5
73	2	4	12212	S06 E33	70	800	3.5
73	2	5	12212	S06 E20	71	1000	3.5
73	2	6	12212	S06 E06	71	800	3.5
73	2	7					
73	2	8	12212	S06 W20	72	700	3.0
73	2	9	12212	S07 W34	73	800	2.5
73	2	10	12212	S07 W48	72	600	2.5
73	2	11	12212	S07 W62	74	700	2.0
73	2	12	12212	S08 W75	74	500	1.0

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
19105	S09 E70	70	(BP)	3	40	2	CSO	5	2
	S07 E56				60	7	CSO	10	5
	S07 E50				110	16	DAI	11	5
	S07 E36				120	9	DAC	9	5
19105	S08 E18	72	(BP)	3	50	13	CAI	7	3
	S09 E08				10	7	BXI	4	2
	S10 W03				0	4	AXX	3	2
19105	S06 W21	72		0				2	1

REGIONS OF SOLAR ACTIVITY

FEBRUARY 1973

MCMATH REGION 12215 CMP DATE 7.8 RETURN OF REGION 12171* ROTATION 3

CALCIUM PLAGE DATA							SUNSPOT DATA							9.1 CM
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA CNT	C	INT FLUX
73	2	2	12215	S16 E70	60	600	1.0								
73	2	3	12215	S16 E55	62	600	1.0								
73	2	4	12215	S16 E41	62	800	1.0								
73	2	5	12215	S16 E29	62	500	1.0								
73	2	6	12215	S18 E15	62	700	1.5								
73	2	8	12215	S18 W10	62	800	1.0								
73	2	9	12215	S20 W23	62	800	1.0								
73	2	10	12215	S20 W36	60	800	1.0								
73	2	11	12215	S20 W48	60	600	1.0								
73	2	12	12215	S20 W62	61	700	1.0								
73	2	13	12215	S20 W72	58	600	1.0								

MCMATH REGION 12222 CMP DATE 8.2

CALCIUM PLAGE DATA							SUNSPOT DATA							9.1 CM
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA CNT	C	INT FLUX
73	2	8	12222	N18 W05	57	100	1.0								
73	2	9	12222	N18 W18	57	100	1.0								

MCMATH REGION 12218 CMP DATE 9.3 RETURN OF REGION 12171* ROTATION 3

CALCIUM PLAGE DATA							SUNSPOT DATA							9.1 CM
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA CNT	C	INT FLUX
73	2	3	12218	S22 E75	42	500	1.0								3 1
73	2	4	12218	S22 E60	43	500	1.0								7 4
73	2	5	12218	S21 E48	43	500	1.0								
73	2	6	12218	S24 E33	44	500	1.0								
73	2	8	12218	S22 E10	42	400	1.5								
73	2	9	12218	S22 W04	43	400	1.0								
73	2	10	12218	S23 W18	42	800	1.0								
73	2	11	12218	S22 W29	41	400	1.0								
73	2	12	12218	S22 W42	41	400	1.0								
73	2	13	12218	S22 W51	37	400	1.0								

MCMATH REGION 12220 CMP DATE 10.6

CALCIUM PLAGE DATA							SUNSPOT DATA							9.1 CM
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA CNT	C	INT FLUX
73	2	5	12220	S10 E65	26	300	1.0								3 2
73	2	6	12220	S10 E51	26	300	1.0								4 2
73	2	7													7 3
73	2	8	12220	S11 E26	26	300	1.0								3 1
73	2	9	12220	S11 E13	26	300	1.0								
73	2	10	12220	S11 W02	25	300	1.0								
73	2	11	12220	S12 W14	26	300	1.0								
73	2	12	12220	S12 W27	26	300	1.0								
73	2	13	12220	S11 W42	28	300	1.5								

MCMATH REGION 12223 CMP DATE 10.6

CALCIUM PLAGE DATA							SUNSPOT DATA							9.1 CM
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA CNT	C	INT FLUX
73	2	6	12223	N18 E54	23	300	2.0								
73	2	7							N13 E40				0 1	AXX	
73	2	8	12223	N17 E26	26	600	3.0	19108	N14 E23	28	(B)	3	40 4	DRO	
73	2	9	12223	N17 E13	26	800	2.5	19108	N13 E05	29	(B)	2	50 7	DAO	
73	2	10	12223	N16 W02	26	800	2.5		N13 W02				50 12	DAI	
73	2	11	12223	N16 W17	29	900	3.0		N12 W15				60 14	DRC	
73	2	12	12223	N16 W30	29	1000	2.5		N12 W30				10 4	BXO	
73	2	13	12223	N14 W44	30	1200	3.5	19108	N12 W46	31	(BP)	3	10 5	BXO	
73	2							19111	N16 W45	30	(B)	2			
73	2	14							N10 W54				0 2	AXX	23 12
73	2								N13 W55				50 4	DAC	
73	2	15						19108	N12 W81	37	AP	0			
73	2							19111	N17 W76	32	(BF)	2	100 4	DAO	13 6
73	2	16	12223	N13 W88	34	600	2.0								13 6

*An asterisk beside the "Return of Region" number indicates that the new region is only part of the area of the old region.

REGIONS OF SOLAR ACTIVITY

FEBRUARY 1973

MCMATH REGION 12229 CMP DATE 11.6

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	12	12229	S17 W13	12	300	2.5
73	2	13	12229	S17 W26	12	100	2.0
73	2	16	12229	S18 W64	10	200	1.0

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT FLUX
	S17 W12				60	6	CRO	
19112	S17 W32	17	(AP)	2	0	1	AXX	

MCMATH REGION 12231 CMP DATE 11.7

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	16	12231	S07 W65	11	100	1.0
73	2	17	12231	S07 W79	13	300	2.5

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT FLUX

MCMATH REGION 12217 CMP DATE 11.8

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	5	12217	N12 E85	6	1500	2.5
73	2						
73	2	6	12217	N12 E70	7	2200	2.5
73	2						
73	2	7					
73	2						
73	2	8	12217	N12 E45	7	2800	3.0
73	2						
73	2	9	12217	N11 E30	9	2800	3.5
73	2						
73	2						
73	2	10	12217	N11 E16	8	3100	3.5
73	2						
73	2	11	12217	N10 E03	9	3100	3.5
73	2						
73	2						
73	2	12	12217	N10 W14	13	3200	3.0
73	2						
73	2						
73	2	13	12217	N10 W25	11	3200	3.5
73	2						
73	2	14					
73	2						
73	2						
73	2	15					
73	2						
73	2						
73	2	16	12217	N11 W65	11	3000	3.5
73	2						
73	2						
73	2	17	12217	N11 W78	12	2500	3.0

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT FLUX
19106	N11 E66	24	(AF)	4	150	4	DHO	13 6
19107	N06 E66	24	(BP)	3				
	N05 E66				90	3	HAX	14 6
	N10 E65				150	1	HSX	
	N05 E53				90	3	HAX	15 7
	N10 E51				150	1	HSX	
19106	N11 E36	15	(AP)	5	140	1	HSX	16 8
19107	N07 E39	12	(BP)	4	100	6	CAO	
19106	N11 E18	16	(AP)	5				21 10
19107	N08 E21	13	(BP)	4	160	2	HSX	
	N08 E28				140	15	DAO	
	N08 E16				180	20	DAO	20 9
	N12 E12				150	6	CAO	
	N15 E10				20	7	CRO	20 9
	N08 E04				190	13	DAO	
	N11 E00				200	4	DAO	
	N15 W03				0	2	BXO	22 10
	N08 W12				80	6	CAO	
	N11 W15				170	6	CAO	
19106	N12 W31	16	(BP)	5	150	7	CAC	12 6
19107	N07 W28	13	(AF)	4	40	6	CAO	
	N08 W40				110	4	HAX	
	N04 W38				30	1	HSX	
	N07 W29				0	2	AXX	
19106	N12 W61	17	(AP)	3				
19107	N06 W59	15	(AF)	3	70	2	HSX	
	N07 W56				30	1	HSX	
19106	N12 W75	19	(AP)	3				
19107	N07 W71	15	(AP)	2	20	1	HRX	
	N04 W65				10	1	AXX	
								7 3

MCMATH REGION 12230 CMP DATE 13.6

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	12	12230	N13 E14	346	300	2.0
73	2	13	12230	N13 W01	347	200	2.5
73	2	16	12230	N11 W40	346	100	2.5
73	2	17	12230	N11 W52	346	300	2.5
73	2	18	12230	N10 W65	346	100	1.0
73	2	19					

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT FLUX
	N15 E15				20	4	CRO	
								5 2
								3 1

MCMATH REGION 12224 CMP DATE 14.4

RETURN OF REGION 12186 & 12192 ROTATION 3 & 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT
73	2	8	12224	S10 E77	336	2000	2.5
73	2	9	12224	S10 E61	339	2200	2.5
73	2	10	12224	S12 E48	337	2000	3.0
73	2	11	12224	S12 E37	336	2200	2.5
73	2	12	12224	S13 E25	335	1800	2.5
73	2	13	12224	S13 E10	336	1800	2.5
73	2	14					
73	2	16	12224	S12 W35	341	1400	2.5
73	2	17	12224	S13 W48	342	1300	2.0
73	2	18	12224	S13 W60	341	1200	1.5
73	2	19					

SUNSPOT DATA 9.1 CM

NW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT FLUX
19109	S07 E65	347	(AF)	2				9 4
								4 2
								5 2
								6 3
	S14 E03				0	4	BXO	4 2
								3 1
								4 2

REGIONS OF SOLAR ACTIVITY

FEBRUARY 1973

MCMATH REGION 12225 CMP DATE 14.5

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	8	12225	S02	E85	328	300	1.5
73	2	9	12225	S03	E68	332	300	1.5
73	2	10	12225	S04	E54	331	400	1.5
73	2	11	12225	S03	E41	332	300	2.0
73	2	12	12225	S03	E27	333	300	1.5
73	2	13	12225	S03	E11	335	200	1.0
73	2	14						
73	2	15						

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	9.1 CM FLUX
19110	S04	E79	333	(AP)	2					
19110	S04	E68	335	(AP)	2	20	1	HSX	8	3
	S03	E58				10	1	HSX	5	2
	S03	E43				10	1	HRX		
	S04	E29				10	1	AXX		
19110	S04	E11	334	(AP)	2	10	3	CRO	5	2
	S07	E02				10	1	AXX		
19110	S04	W17	333	AP	0	0	2	AXX	4	2

MCMATH REGION 12239 CMP DATE 14.7

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	20	12239	N10	W80	332	800	2.0

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	9.1 CM FLUX
	N08	W75				10	3	BXO	2	1

MCMATH REGION 12226 CMP DATE 15.5 RETURN OF REGION 12185 ROTATION 3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	9	12226	N14	E79	321	100	1.0
73	2	10	12226	N13	E64	321	500	1.0
73	2	11	12226	N13	E52	321	500	1.0
73	2	12	12226	N13	E39	321	500	1.5
73	2	13	12226	N14	E25	321	600	2.0
73	2	16	12226	N15	W15	321	500	1.5
73	2	17	12226	N15	W28	322	400	2.0
73	2	18	12226	N14	W41	322	300	1.5

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	9.1 CM FLUX

MCMATH REGION 12227 CMP DATE 16.8

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	10	12227	S15	E85	300	1000	3.5
73	2	11	12227	S15	E68	305	1800	3.5
73	2	12	12227	S15	E55	305	1800	3.5
73	2	13	12227	S15	E41	305	2000	3.5
73	2	14						
73	2	15						
73	2	16	12227	S16	E02	304	2000	3.5
73	2	17	12227	S16	W11	305	2000	3.5
73	2	18	12227	S16	W23	304	2000	3.0
73	2	19						
73	2							
73	2	20	12227	S16	W52	304	2000	4.0
73	2	21	12227	S16	W65	303	2100	3.0
73	2	22	12227	S15	W78	303	1500	2.5
73	2	23	12227	S18	W87	301	400	1.0

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	9.1 CM FLUX
	S13	E75				100	3	CAC	12	5
	S16	E67				120	3	CAC	14	6
	S16	E53				130	2	CSO	15	6
19113	S17	E39	306	(BP)	6	140	6	DAO	15	7
	S18	E28				160	14	DAI	17	8
19113	S16	E09	307	(B)	4	230	18	DSO	14	6
19113	S16	W02	306	(BP)	4				13	6
19113	S17	W14	305	(BP)	4	200	10	DAI	12	5
19113	S16	W29	305	(BP)	4	240	12	DAI	9	4
19118	S20	W40	307	(AP)	1				10	4
19113	S16	W39	306	(BP)	4	150	3	DAC		
19113	S16	W55	306	BP	0	110	6	DAO	9	4
	S16	W65				180	3	DAC	13	5
19113	S16	W80	306	AP	0	50	1	HRX	11	5

MCMATH REGION 12232 CMP DATE 17.2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	16	12232	N11	E07	299	100	1.5
73	2	17	12232	N11	W08	302	600	1.5
73	2	18	12232	N11	W21	302	500	1.5

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	9.1 CM FLUX
19115	N11	E03	301	(AP)	2					
19115	N10	W11	302	(AP)	2	10	1	AXX		

MCMATH REGION 12228 CMP DATE 18.2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	11	12228	S07	E87	286	200	1.5
73	2	12	12228	S07	E79	281	1400	3.0
73	2	13	12228	S07	E64	282	1300	3.5
73	2	14						
73	2	15						
73	2	16	12228	S08	E21	285	1300	3.5
73	2	17	12228	S09	E08	286	1200	3.5
73	2	18	12228	S09	W05	286	1200	3.0
73	2	19						
73	2	20	12228	S09	W33	285	1200	3.5
73	2	21	12228	S10	W46	284	1000	2.0
73	2	22	12228	S11	W60	285	1000	2.0
73	2	23	12228	S12	W73	287	500	1.5

SUNSPOT DATA

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	9.1 CM FLUX
	S08	E78				10	2	BXO		
19114	S09	E59	286	(B)	4	0	9	CSI	10	4
	S10	E49				50	15	DAI	9	4
19114	S09	E28	288	(BP)	2	40	6	CAI	9	4
19114	S10	E17	287	(BP)	3				8	3
19114	S10	E06	285	(AP)	2	80	20	ORI	4	2
19114	S10	W09	285		0	10	2	BXO	2	1
									3	1
19114	S10	W35	286	AP	0				2	1
									4	2
									7	3

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MCMATH REGION 12247 CMP DATE 19.3

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	23	12247	S12	W58	272	300	2.5
73	2	24	12247	S12	W71	271	600	3.0
73	2	25						

SUNSPOT DATA 9.1 CM

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
									6	2
									5	2

MCMATH REGION 12234 CMP DATE 20.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	17	12234	N18	E27	267	200	1.5
73	2	18	12234	N18	E15	266	200	1.5
73	2	20	12234	N19	W11	263	100	1.0
73	2	21	12234	N19	W25	263	100	1.0
73	2	22	12234	N20	W40	265	100	2.0
73	2	23	12234	N19	W53	267	300	2.0
73	2	24	12234	N18	W67	267	300	1.5

SUNSPOT DATA 9.1 CM

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX

MCMATH REGION 12233 CMP DATE 20.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	18	12233	S13	E19	262	300	2.0
73	2	19						
73	2	20	12233	S14	W10	262	500	3.0
73	2	21	12233	S15	W23	261	500	3.0
73	2	22	12233	S15	W37	262	700	3.0
73	2	23	12233	S15	W48	262	1000	2.5
73	2	24	12233	S15	W61	261	600	2.5
73	2							
73	2	25						
73	2	26	12233	S16	W65	259	500	1.5

SUNSPOT DATA 9.1 CM

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
19116	S17	E15	261	(BF)	2					
19116	S16	E04	263	(AF)	1	10	2	BXC		
19116	S16	W11	252	AP	0	30	8	CAI	5	2
	S17	W17				90	8	CAI	4	2
19116	S18	W32	258	BF	0	10	3	AXX		
	S18	W42				20	1	HSX		
	S18	W50				20	1	AXX		
	S10	W61				30	3	BXO		
19116	S18	W72	260	BF	0	0	1	AXX		

MCMATH REGION 12244 CMP DATE 21.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	22	12244	N05	W24	249	100	1.5
73	2	23	12244	N05	W36	250	300	1.5
73	2	24	12244	N05	W50	250	100	1.5

SUNSPOT DATA 9.1 CM

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX

MCMATH REGION 12235 CMP DATE 21.3 RETURN OF REGION 12197 ROTATION 2

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	16	12235	N12	E68	238	300	1.0
73	2	17	12235	N13	E54	240	400	1.5
73	2	18	12235	N13	E35	246	300	1.5
73	2	20	12235	N11	E06	246	200	1.5
73	2	21	12235	N11	W07	245	200	1.0
73	2	22	12235	N11	W20	245	200	1.0
73	2	23	12235	N12	W32	246	400	1.0

SUNSPOT DATA 9.1 CM

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX

MCMATH REGION 12236 CMP DATE 23.0

CALCIUM PLAGE DATA

YR	MO	DA	MC NO.	LAT	CMD	L	AREA	INT
73	2	16	12236	N20	E90	216	300	1.0
73	2	17	12236	N20	E78	216	600	3.0
73	2	18	12236	N20	E56	225	700	2.5
73	2	19						
73	2	20	12236	N19	E27	225	700	2.5
73	2	21	12236	N18	E15	223	700	2.5
73	2	22	12236	N18	E02	223	400	2.5
73	2	23	12236	N18	W09	223	600	2.5
73	2	24	12236	N18	W24	224	400	2.0
73	2	25						
73	2	26	12236	N18	W50	224	500	2.0
73	2	27	12236	N18	W63	225	400	2.0
73	2	28	12236	N18	W79	227	300	1.0

SUNSPOT DATA 9.1 CM

MW NO.	LAT	CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
									3	1
19117	N17	E57	219	AF	0				2	1
									3	1
									3	1
									3	1

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MCMATH REGION 12238 CMP DATE 23.4

				CALCIUM PLAGE DATA					SUNSPOT DATA								9.1 CM	
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
73	2	18	12238	N02 E63	218	100	1.5										
73	2	19														3	1

MCMATH REGION 12250 CMP DATE 24.8

				CALCIUM PLAGE DATA					SUNSPOT DATA								9.1 CM	
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
73	2	26	12250	S27 W24	198	100	1.0										

MCMATH REGION 12249 CMP DATE 25.4

				CALCIUM PLAGE DATA					SUNSPOT DATA								9.1 CM	
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
73	2	24	12249	N06 E08	192	100	2.5										
73	2	25						19121	N06 W04	192	(B)	3	10	4	BXO		
73	2	26	12249	N07 W17	191	700	3.5	19121	N07 W18	192	(B)	2	30	6	BXO		
73	2	27	12249	N07 W31	193	700	3.5										
73	2	28	12249	N07 W45	193	800	3.0		N06 W42				30	4	AXX	3	1
73	3	1	12249	N07 W58	194	700	3.0	19121	N06 W59	193	(B)	1	10	2	BXO	4	2
73	3	2	12249	N07 W72	192	500	2.5										

MCMATH REGION 12240 CMP DATE 26.3

				CALCIUM PLAGE DATA					SUNSPOT DATA								9.1 CM	
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
73	2	20	12240	S19 E68	184	500	3.0	19119	S18 E72	179		0				2	1
73	2	21	12240	S20 E57	181	500	3.0									6	2
73	2	22	12240	S20 E45	180	700	3.0	19119	S19 E46	180	A	0	0	1	AXX	4	2
73	2	23	12240	S18 E33	181	500	2.5		S18 E38				10	2	HRX	4	2
73	2	24	12240	S18 E20	180	400	2.0									3	1
73	2	25														3	1
73	2	26	12240	S18 W05	179	400	1.5										
73	2	27	12240	S18 W18	180	400	1.5										
73	2	28	12240	S18 W32	180	400	2.5									8	3
73	3	1	12240	S18 W44	180	300	2.0									8	3
73	3	2	12240	S18 W57	177	200	1.0									5	2
73	3	3							S17 W67				10	1	HRX		

MCMATH REGION 12242 CMP DATE 27.0

				CALCIUM PLAGE DATA					SUNSPOT DATA								9.1 CM	
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
73	2	21	12242	S15 E69	169	100	2.0										
73	2	22	12242	S14 E56	169	200	2.0										
73	2	23	12242	S12 E43	171	300	3.0		S13 E47				20	6	CSO		
73	2	24	12242	S12 E28	172	500	2.5		S13 E37				50	7	CRO		
73	2								S20 E29				10	1	AXX		
73	2	25							S16 E17				0	3	BXO		
73	2	26	12242	S12 E05	169	600	3.0	19123	S14 E03	171	(AF)	1					
73	2	27	12242	S13 W11	173	600	3.0										
73	2	28	12242	S13 W24	172	600	3.0		S14 W23				0	2	HRX		
73	3	1	12242	S13 W37	173	1000	3.0	19123	S13 W41	175	(BP)	4	60	10	DAO		
73	3	2	12242	S13 W53	173	700	3.0	19123	S13 W54	175	(BP)	3	30	5	CRO		
73	3	3						19123	S12 W70	175	(BF	2					
73	3	4	12242	S13 W80	174	500	2.5										

MCMATH REGION 12256 CMP DATE 27.7

				CALCIUM PLAGE DATA					SUNSPOT DATA								9.1 CM	
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX
73	3	1	12256	N07 W25	161	100	2.5										
73	3	2	12256	N07 W40	160	100	1.5										
73	3	4	12256	N07 W64	158	300	1.0										

Note: When there is only one side of the parenthesis around the magnetic type of sunspot it means that only half of the sunspot group was measured. The parenthesis is on whichever half was measured, either the leader or the follower.

REGIONS OF SOLAR ACTIVITY

FEBRUARY 1973

MCMATH REGION 12243 CMP DATE 27.8 RETURN OF REGION 12205 ROTATION 3

				CALCIUM PLAGE DATA					SUNSPOT DATA									9.1 CM
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	AREA	CNT	C	INT	FLUX	
73	2	21	12243	N06 E84	154	400	1.0		N09 E64				20	2	CRO	5	2	
73	2	22	12243	N06 E66	159	500	1.5											
73	2	23	12243	N07 E56	158	500	1.5											
73	2	24	12243	N07 E42	158	600	1.5											
73	2	26	12243	N07 E16	158	600	1.5											
73	2	27	12243	N06 E03	159	800	1.5											
73	2	28	12243	N06 W10	158	800	2.0											
73	3	1	12243	N07 W22	158	900	1.5											
73	3	2	12243	N07 W35	155	500	1.0											
73	3	4	12243	N07 W56	152	300	1.0											

Note: New region 12212 has developed near the location of old region 12169 of the previous rotation.
Regions 12230 and 12239 have developed in the location of old plage 12180.
Region 12233 has developed in the location of old region 12193.
No calcium spectroheliograms were secured at the McMath-Hulbert Observatory on February 7, 14, 15 and 25, 1973.
No sunspot observations were made at Mt. Wilson Observatory on February 2-4, 6, 7, 10-12, 14, 21, 23, 24, 27 & 28.

DAILY CALCIUM PLAGE INDEX

FEBRUARY 1973

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
73	2	1	14.7	73	2	11	21.8	73	2	21	7.8
73	2	2	11.6	73	2	12	22.4	73	2	22	6.7
73	2	3	14.4	73	2	13	26.6	73	2	23	7.9
73	2	4	13.8	73	2	14	*	73	2	24	8.2
73	2	5	12.4	73	2	15	*	73	2	25	*
73	2	6	13.0	73	2	16	19.0	73	2	26	17.9
73	2	7	*	73	2	17	16.6	73	2	27	18.4
73	2	8	13.4	73	2	18	12.8	73	2	28	19.8
73	2	9	16.1	73	2	19	*				
73	2	10	19.6	73	2	20	12.0				

* NO OBSERVATIONS

SOLAR X RAYS MEASURED BY SATELLITE

SOLAR X-RAYS MEASURED BY SATELLITE
SOLRAD 10 – EXPLORER 44

FEBRUARY 1973

NAVAL RESEARCH LABORATORY 1 - 8A HOURLY AVERAGES (10^{-3} ergs/cm^2/sec)

DAY	HOUR																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0.10	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.03	0.05	0.04	0.04	0.05	0.04	0.05	0.05	0.04	0.05	0.04	0.05	0.06	0.05	0.05	0.04
2	0.05	0.05	0.06	0.06	0.06	0.07	0.06	0.07	0.08	0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.14	0.10	0.12	0.10	0.09	0.25
3	0.58	0.39	0.35	0.32	0.28	0.25	0.24	0.20	0.15	0.12	0.11	0.11	0.11	0.10	0.16	0.21	0.23	0.23	1.16	0.23	0.18	0.11	0.09	0.09
4	0.09	0.10	0.12	0.09	0.09	0.09	0.11	0.10	0.10	0.10	0.12	0.10	0.11	0.18	0.11	0.12	0.12	0.20	0.12	0.12	0.11	0.12	0.11	0.12
5	0.21	0.28	0.16	0.19	0.15	0.20	0.14	0.15	0.14	0.14	0.21	0.18	0.14	0.12	0.17	0.22	0.19	0.31	0.29	0.19	0.16	0.16	0.17	0.16
6	0.19	0.15	0.15	0.14	0.13	0.13	0.14	0.14	0.17	0.15	0.13	0.12	0.17	0.14	0.13	0.14	0.18	0.12	0.13	0.12	0.10	0.09	0.09	0.12
7	0.10	0.12	0.10	0.11	0.12	0.12	0.11	0.10	0.11	0.12	0.12	0.12	0.11	0.10	0.11	0.11	0.12	0.13	0.13	0.14	0.10	0.12	0.11	0.12
8	0.12	0.13	0.11	0.10	0.09	0.11	0.13	0.12	0.12	0.12	0.11	0.11	0.11	0.12	0.12	0.15	0.15	0.14	0.29	0.22	0.12	0.12	0.15	0.19
9	0.14	0.12	0.15	0.12	0.16	0.12	0.12	0.18	0.17	0.15	0.14	0.13	0.14	0.15	0.14	0.13	0.12	0.13	0.10	0.12	0.12	0.11	0.11	0.13
10	0.12	0.10	0.13	0.13	0.22	0.15	0.12	0.12	0.13	0.13	0.13	0.15	0.15	0.35	1.54	0.43	0.16	0.16	0.16	0.47	0.19	0.34	0.35	0.18
11	0.17	0.22	0.16	0.19	0.17	0.13	0.18	0.13	0.14	0.12	0.16	0.12	0.13	0.11	0.13	0.13	0.13	0.13	0.14	0.13	0.17	0.18	0.13	0.15
12	0.13	0.17	0.17	0.21	0.19	0.17	0.22	0.19	0.20	0.23	0.31	0.27	0.85	0.41	0.21	0.26	0.16	0.17	0.24	0.13	0.68	0.32	0.17	0.17
13	0.14	0.15	0.13	0.15	0.12	0.12	0.12	0.20	0.59	0.14	0.12	0.16	0.14	0.12	0.33	0.16	0.15	1.08	0.22	0.14	0.13	0.17	0.13	0.20
14	0.27	0.14	0.22	0.52	0.52	0.27	0.20	0.21	0.16	0.16	0.19	0.21	1.28	1.01	0.51	0.71	0.32	0.52	0.65	2.14	2.73	2.11	1.50	4.99
15	1.83	2.11	0.60	0.39	2.13	0.74	1.16	0.43	0.41	0.71	2.15	1.29	1.01	0.31	0.22	0.29	0.31	0.26	0.49	0.35	0.19	0.19	0.25	0.73
16	0.64	0.51	0.29	0.25	0.19	0.17	0.18	0.16	0.20	0.19	0.20	0.33	1.21	0.20	0.21	0.20	0.15	0.16	1.10	2.72	0.66	0.18	0.14	0.13
17	0.13	0.11	0.13	0.14	0.10	0.10	0.14	0.18	0.31	0.14	0.13	0.17	0.14	0.12	0.09	0.10	0.09	0.10	0.10	0.17	0.21	0.20	0.11	0.09
18	0.11	0.09	0.15	0.08	0.08	0.10	0.07	0.08	0.12	0.11	0.14	0.14	0.11	0.10	0.09	0.07	0.08	0.08	0.08	0.10	0.12	1.79	0.65	0.31
19	0.17	0.11	0.10	0.09	0.09	0.09	1.14	0.49	0.13	0.09	0.09	0.06	0.06	0.06	0.06	0.05	0.07	0.08	0.10	0.05	0.06	0.06	0.06	0.06
20	0.05	0.05	0.04	0.12	0.06	0.05	0.06	0.06	0.06	0.15	0.05	0.06	0.09	0.06	0.07	0.06	0.06	0.08	0.08	0.06	0.05	0.06	0.06	0.08
21	0.06	0.06	0.06	0.06	0.09	0.12	0.48	0.08	0.06	0.12	0.14	0.12	0.14	0.13	0.18	0.17	0.13	0.21	0.12	0.11	0.10	0.14	0.15	0.28
22	0.27	3.08	0.14	0.42	0.18	0.31	0.65	2.12	17.4	0.24	0.43	0.32	4.82	1.42	0.31	0.39	2.97	0.74	0.26	3.10	0.25	0.22	0.24	12.2
23	1.30	0.75	1.15	0.68	0.37	0.17	0.21	0.23	0.31	0.25	0.31	1.53	0.41	0.19	0.21	0.23	0.45	0.23	0.42	0.23	0.17	0.50	0.41	1.83
24	0.20	0.24	0.31	0.87	0.45	0.45	0.38	0.14	0.20	0.18	0.20	0.18	0.18	0.20	0.19	0.26	0.41	0.24	0.21	0.37	0.35	0.33	0.21	1.04
25	0.17	0.20	0.57	0.29	0.19	0.20	0.40	0.21	0.19	0.13	0.15	0.13	0.15	0.14	0.21	0.14	0.14	0.16	0.17	0.17	0.17	0.26	0.15	0.15
26	0.18	0.12	0.12	0.12	0.13	0.16	0.13	0.09	0.14	0.11	0.10	0.09	0.14	0.11	0.11	0.12	0.12	0.11	0.10	0.11	0.19	0.16	0.12	0.12
27	0.11	0.16	0.26	0.13	0.16	0.14	0.12	0.10	0.11	0.12	0.18	0.16	0.12	0.31	0.31	0.11	0.10	0.11	0.11	0.11	0.09	0.09	0.10	0.09
28	0.11	0.13	0.11	0.09	0.16	0.11	0.10	0.12	0.16	0.12	0.28	0.25	0.16	0.16	0.16	0.14	0.19	1.05	0.28	0.22	0.10	3.06	17.9	0.15

VALUES MARKED WITH (<) WERE CALCULATED FROM DATA PROVIDED BY SOLRAD 9

SOLAR X-RAYS MEASURED BY SATELLITE
SOLRAD 10 – EXPLORER 44

FEBRUARY 1973

NAVAL RESEARCH LABORATORY 8 - 20A HOURLY AVERAGES (10^{-2} ergs/cm^2/sec)

DAY	HOUR																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0,52	0,46	0,44	0,44	0,46	0,46	0,44	0,42	0,40	0,44	0,42	0,41	0,46	0,45	0,46	0,44	0,40	0,42	0,42	0,46	0,46	0,45	0,46	0,40
2	0,49	0,46	0,46	0,46	0,46	0,46	0,46	0,48	0,50	0,52	0,49	0,48	0,46	0,46	0,49	0,46	0,46	0,47	0,62	0,58	0,63	0,59	0,61	0,81
3	1,18	1,11	0,99	0,98	0,95	0,88	0,90	0,86	0,73	0,72	0,65	0,65	0,62	0,60	0,68	0,92	0,86	0,85	1,92	0,98	0,86	0,73	0,67	0,63
4	0,61	0,65	0,72	0,61	0,59	0,60	0,63	0,65	0,65	0,67	0,67	0,64	0,69	0,86	0,70	0,72	0,72	0,86	0,72	0,72	0,78	0,74	0,69	0,71
5	0,89	1,02	0,86	0,89	0,83	0,91	0,85	0,85	0,84	0,82	0,89	0,88	0,78	0,73	0,81	0,92	0,89	1,07	1,09	0,94	0,89	0,89	0,86	0,84
6	0,82	0,79	0,83	0,84	0,75	0,79	0,80	0,82	0,84	0,86	0,80	0,73	0,77	0,77	0,74	0,78	0,87	0,72	0,76	0,76	0,68	0,70	0,67	0,71
7	0,70	0,72	0,69	0,71	0,73	0,73	0,72	0,69	0,71	0,72	0,73	0,73	0,72	0,72	0,72	0,72	0,72	0,75	0,77	0,84	0,71	0,74	0,72	0,72
8	0,72	0,73	0,71	0,70	0,68	0,71	0,74	0,73	0,72	0,73	0,72	0,72	0,72	0,72	0,72	0,82	0,83	0,81	1,03	1,12	0,82	0,75	0,85	0,96
9	0,84	0,78	0,83	0,71	0,77	0,72	0,75	0,90	0,88	0,87	0,85	0,79	0,80	0,85	0,84	0,77	0,72	0,77	0,75	0,74	0,73	0,72	0,71	0,76
10	0,72	0,72	0,73	0,73	0,88	0,85	0,73	0,73	0,75	0,75	0,77	0,84	0,85	1,11	2,61	1,27	0,86	0,89	0,89	1,21	0,93	1,16	1,16	0,90
11	0,86	0,94	0,86	0,88	0,86	0,75	0,84	0,75	0,77	0,71	0,78	0,72	0,72	0,72	0,73	0,79	0,79	0,75	0,84	0,73	0,83	0,88	0,77	0,81
12	0,81	0,85	0,86	0,90	0,88	0,86	0,93	0,93	0,93	1,02	1,08	1,05	2,12	1,30	1,07	1,11	0,90	0,90	1,12	0,82	1,30	1,13	0,90	0,86
13	0,84	0,85	0,82	0,84	0,72	0,72	0,73	0,83	1,30	0,80	0,71	0,79	0,80	0,74	1,11	0,82	0,88	1,76	1,07	0,76	0,74	0,84	0,73	0,86
14	0,97	0,80	0,91	1,22	1,29	1,03	0,96	0,96	0,87	0,86	0,88	0,95	1,71	1,65	1,30	1,54	1,30	1,37	1,45	3,72	3,75	3,20	2,69	6,64
15	3,67	3,65	1,50	1,41	4,09	1,97	2,22	1,26	1,26	1,65	3,20	2,96	3,03	1,26	1,06	1,18	1,12	1,11	1,35	1,26	0,93	0,91	0,98	1,63
16	1,57	1,44	1,21	1,09	0,98	0,90	0,90	0,86	0,92	0,87	0,90	1,16	2,47	0,95	0,94	0,87	0,83	0,84	1,75	4,08	1,33	0,84	0,75	0,70
17	0,72	0,65	0,72	0,66	0,59	0,60	0,66	0,79	0,85	0,70	0,64	0,71	0,68	0,65	0,58	0,65	0,63	0,59	0,60	0,66	0,72	0,72	0,60	0,55
18	0,56	0,48	0,59	0,46	0,46	0,54	0,46	0,47	0,61	0,58	0,64	0,65	0,57	0,60	0,51	0,59	0,53	0,49	0,49	0,56	0,61	2,90	1,33	0,98
19	0,71	0,59	0,58	0,52	0,50	0,51	1,65	0,99	0,58	0,48	0,46	0,44	0,34	0,40	0,47	0,35	0,41	0,45	0,46	0,33	0,34	0,34	0,34	0,37
20	0,34	0,33	0,33	0,40	0,38	0,33	0,35	0,34	0,34	0,41	0,33	0,34	0,43	0,38	0,46	0,37	0,36	0,41	0,43	0,36	0,33	0,34	0,41	0,46
21	0,44	0,40	0,39	0,40	0,46	0,51	0,93	0,46	0,45	0,49	0,58	0,59	0,64	0,57	0,80	0,76	0,65	0,70	0,59	0,59	0,55	0,62	0,65	0,84
22	0,82	1,86	0,64	0,73	0,70	0,88	1,14	1,53	7,20	0,83	0,90	0,93	3,46	3,08	1,15	1,20	3,38	1,68	0,95	3,40	0,95	0,81	0,89	7,44
23	1,41	1,55	1,90	1,60	0,91	0,73	0,83	0,82	0,85	0,89	0,93	1,72	1,15	0,94	0,86	0,95	1,13	0,87	1,11	0,83	0,83	1,19	1,24	2,77
24	0,87	0,90	1,03	1,73	1,35	1,11	1,05	0,73	0,79	0,77	0,86	0,90	0,80	0,90	0,81	0,95	1,22	1,01	0,94	1,06	1,03	1,03	0,88	1,73
25	0,81	0,83	1,20	0,90	0,81	0,80	1,07	0,91	0,84	0,64	0,68	0,73	0,68	0,77	0,84	0,72	0,71	0,72	0,78	0,73	0,78	0,80	0,72	0,72
26	0,73	0,61	0,59	0,59	0,60	0,70	0,61	0,56	0,58	0,60	0,58	0,58	0,62	0,68	0,56	0,58	0,59	0,57	0,56	0,59	0,67	0,69	0,59	0,58
27	0,59	0,67	0,90	0,62	0,66	0,66	0,59	0,58	0,59	0,63	0,68	0,80	0,72	0,71	0,78	0,59	0,58	0,58	0,53	0,60	0,48	0,53	0,55	0,49
28	0,57	0,61	0,59	0,56	0,60	0,58	0,59	0,59	0,62	0,62	1,01	0,92	0,81	0,74	0,72	0,66	0,78	1,64	0,92	0,82	0,60	1,66	11,7	0,67

SOLAR X-RAYS BY SATELLITE
SOLRAD 10 - EXPLORER 44

FEBRUARY 1973

OUTSTANDING EVENTS

NAVAL RESEARCH LABORATORY

DAY	START TIME	0.5-3A FLUX XE-5	PEAK TIME	1-8A FLUX XE-4	PEAK TIME	8-20A FLUX XE-3	PEAK TIME	END TIME	COMMENTS
14	1903	9.60	1903	48.30	1904	59.20	1905	1912	
14	2052	38.40	2054	144.00	2054	104.00	2055	2107	
14	2323E	9.60	2324	90.20	2326	88.80	2324	2354	
15	0136	9.60	0140	70.80	0141	74.00	0141	0148	
15	0430	5.04	0430	38.60	0431	59.20	0431	0438	
15	1035	6.35	1035	35.40	1036	44.40	1035	1040	
16	1853	9.60D	1901E	74.10	1857	88.80	1858	1906D	
18	2127	3.94	2127	38.60	2132	59.20	2133	2145D	
22	0136	62.40	0139	144.00	0139	59.20	0142	0150D	
22	0755	216.00	0805	432.00	0805	222.00	0808	0810D	
22	1236	43.20	1238	144.00	1238	88.80	1240	1250	
22	1647	28.80	1649	86.90	1649	59.20	1649	1657	
22	1904	0.00D	1904D	70.80	1907	59.20	1906	1915D	
22	2322	38.40	2325	144.00	2325	88.80	2326	2334	
22	2347	432.00	2351	936.00	2351	355.00	2352	2358	
23	2308	19.20	2309	70.80	2310	59.20	2310	2318	
28	1736	0.00D	1736D	64.40	1737	59.20	1737	1741	
28	2156	324.00	2203	648.00	2203	296.00	2205	2222	

DAY	START TIME	0.8-3A FLUX 10^{-3}	MAX TIME	1-8A FLUX 10^{-3}	END TIME	COMMENTS

SUDDEN IONOSPHERIC DISTURBANCES

FEBRUARY 1973

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
02	1900	2020	1915	2-	1					1	1		1902	12212
03	1756	1845	1807	1-	3			1			4		1747	12211
10	0855	0905	0858	1-	1						1		0851	12217
10	1404	1530	1428	1-	3				1		2		1405E	12224
14	1248	1315	1255	1	5			3	3		3		1239	12217
14	1520	1545	1527	1-	1				1		1		1520E	12223
14	1655	1730	1700	1-	5			1	1		7		NF	
14	1902	2015	1912	1	5	1		1	2	1	10		1905E	12224
14	2051	2145	2057	1	5			2	2	1	11		2052	X-RAY
14	2252	0012	2312	1-	5				3	2	6		2253E	12223
15	0135	0228	0148	1-	1				1				0136	X-RAY
15	1033	1100	1039	1	3	1		1	2		1		1035	X-RAY
16	1211	1230	1217	2	1				1				1209	12228
16	1854	2000	1906	1	5	2		2	1	3	11		1853	X-RAY
18	0816	0550	0839	1	1			1					0814E	12227
22	0135	0220	0143	2	5	2			2	1	2		0134E	12227
22	0755	0840	0758	2	5	4	1	4	3		3		0802E	12246
22	1236	1241D	1241	1	5	2		3	5		3		1236	X-RAY
22	1255	1305	1300	2	5	3	1	6	3		3		*	
22	1648	1800	1657	1+	5	1		1	1	2	11		1647	X-RAY
22	1905	2000	1914	1	5	3			1	4	10		1904	X- RAY
22	2321	0138	2354	2	3				1	1	1		2320	X-RAY
22	2350	0030	2353	1+	5	3			1	1	2		2350E	12246
23	0256	0314	0300	1-	1				1				0254	12246
23	0624	0650	0631	1-	5	1			2				0623	12246
23	1103	1142	1114	1-	1			1					*	
23	1151	1215	1156	2	3			1	2		1		*	
23	1734	1815	1740	1-	5	1		3	1	1	8		NF	
23	2309	2343	2316	1-	5				1	1	4		2309	12246
24	2322	2339	2324	1-	1				1				2325E	12246
25	0222	0243	0227	1-	1				1				0221	12246
25	0314	0351	0314	1-	1				1				0316	12246
26	1523	1537	1529	1-	1			1					1527	12246
27	1346	1429	1411	1-	1			1					1340	12246
28	0035	0215	0148	1	1					1	1		*	
28	1735	1830	1742	1	5	1		2	1	1	3		1733	12246
28	2156	2236	2205	2	5	4		4	3	1	8		2155E	12246

STATIONS REPORTING FOR FEBRUARY 1973

AAVSO (A1, A8, A17, A23, A26, A32, A34) (SEA) (A1, A19, A21, A28, A30, A31, A33, A36, A37, A38) (SES)
BOULDER (BO) (SCNA, SEA)
DARMSTADT (DA) (SWF)
ENKOPING (SW) (SWF)
GESASHI (LORAN-C) (GE) (LF-SPA, SES)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
JUPITER (LORAN-C) (JP) (LF-SPA, SES)
KUHLUNGSBORN (KU) (SEA, SPA)
MANILA (MA) (SWF, SPA)
MARCUS (LORAN-C) (MR) (LF-SPA, SES)
MCMATH (MC) (SWF, SCNA)
NANTUCKET (LORAN-C) (NT) (LF-SPA, SES)
NEUSTRELITZ (NU) (SWF, SCNA)
NEW DELHI (ND) (SWF, SES)
PANSKA VES (PU) (SWF, SEA, SES)
POITIERS (PO) (SEA)
PRESTON (LO) (SEA)
SANDUR (LORAN-C) (SA) (LF-SPA, SES)
SAO PAULO (UM) (SPA, SES)
SOFIA (SF) (SES)
SYLT (LORAN-C) (ST) (LF-SPA, SES)
TABLE MOUNTAIN (TM) (SWF, SPA, LF-SPA)
TORINO (TN) (SPA)
TRINIDAD (TR) (SWF)
UPICE (UI) (SEA)
UPOLO POINT (LORAN-C) (UP) (LF-SPA, SES)
WHITE SANDS (WS) (SWF)
YAP (LORAN-C) (YP) (LF-SPA, SES)

A38 IS A NEW OBSERVER FROM ORMOND BEACH, FLORIDA REPORTING FOR THE FIRST TIME

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) and STATION
01-04	0000-2055 WS
01-02	0000-1319 TR
01	0000-2230 A38, 0145-0209 TM, 1700-2353 UM (18 kHz), 1714-1850 TM
02-03	2357-0128 TR
02	0046-0109 TM, 0420-0452 TM, 2204-2400 TM
03	0000-0543 TM, 0000-1600 MC, 0644-1920 TM, 1325-1417 UM (18 kHz)
04	0909-1152 TR, 1725-1732 TM
05	2005-2112 TM, 2239-2241 TM
06	1001-1345 UM (16 kHz), 1324-1734 TR, 1744-2233 TM
07	0815-0933 UM (16 kHz), 0923-2220 TM
08	0437-1634 TM, 1724-1728 TM
09-10	2249-1240 TR
09	0817-0930 UM (16 kHz), 1400-1745 UM (17 kHz)
13	1003-1320 UM (16 kHz)
14-15	2012-1240 TR
15	1707-2030 UM (18 kHz)
19	1755-1808 BO
20	1006-1330 UM (16 kHz)
22-23	0700-2310 A37, 1817-0807 TR
23	1403-1620 UM (17 kHz)
24-28	2303-2400 TR
26-28	0000-2400 A36
27-28	0130-1500 WS
27	1003-1350 UM (16 kHz), 1135-1607 TM
28	1950-2002 TM

SID's BY McMATH REGION

FEBRUARY 1973

DAY	11	12	17	23	24	27	28	46	X-RAY	UN-KNOWN	NO FP
01											
02		1									
03	1										
04											
05											
06											
07											
08											
09											
10			1		1						
11											
12											
13											
14			1	2	1				1	1	
15									2		
16							1		1		
17											
18						1					
19											
20											
21											
22						1		2	4		1
23								3		1	2
24								1			
25								2			
26								1			
27								1			
28								2			1

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1973

FEB. 1973	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
01	0000	0030	BOUL													
	0000	0745	CULG													
	0000	0004	HARV													
	0736	1245	WEIS													
	1203	2152	SGMR													
	1300	1538	WEIS													
	1401	2400	HARV													
	1400	2400	BOUL										1824.1	1824.2	1	III
	2046	2400	CULG							2107.5	2108.5	1				IIIB
			BOUL							2107.7	2108.5	2	2107.7	2108.5	2	IIIG
02	0000	0030	BOUL													
	0000	0745	CULG													
	0000	0004	HARV													
	0737	1538	WEIS													
	1202	2153	SGMR													
	1401	2400	HARV													
	1600	2400	BOUL							1646.4	1647.5	1	1646.4	1647.5	1	IIIG
			BOUL							2031.4	2032.7	1	2031.4	2032.7	1	IIIG
			BOUL							2135.7	2140.9	1	2135.7	2140.9	1	IIIGG
	2046	2400	CULG							2137	2138	1				IIIG
			CULG							2147.5		1				IIIB
			BOUL							2147.7	2148.2	2	2147.7	2148.2	2	III
			BOUL							2150.4	2151.6	2	2150.4	2151.6	2	IIIG
			CULG							2150.5	2151.5	1				IIIG
			CULG							2154		1				IIIB
			BOUL							2154.3	2155.3	2	2154.3	2155.3	2	III
			BOUL							2304.5	2306.4	2	2304.5	2306.4	2	IIIG
			CULG							2304.5	2306	1				IIIG
03	0000	0004	HARV													
	0000	0030	BOUL													
	0000	0741	CULG							0142	0144	1				IIIG
			CULG							0430.5	0431.5	1				IIIG
			CULG							0521.5						IIIB,W
	1201	2154	SGMR													
	0737	1539	WEIS							1421.5	1421.6	2				IIIB
	1400	2400	HARV				1750	1751	2	1750	1751	2				IIIG
	1600	2400	BOUL							1754.0	1755.0	1	1754.0	1755.0	1	IIIG
			BOUL										2042.8	2055.2	1	IIIN
	2046	2400	CULG							2051		1				IIIB
			CULG							2054	2055	1				IIIG
			CULG							2125	2127	1				IIIGG
			BOUL							2125.5	2126.4	1	2125.5	2126.4	1	IIIG
			BOUL							2218.9	2219.1	1	2218.9	2219.1	1	III
04	0000	0030	BOUL													
	0000	0059	CULG													
	0000	0005	HARV													
	0150	0745	CULG													
	0737	0920	WEIS													
	1343	1538	WEIS													
	1159	2156	SGMR													
	1400	1606	BOUL													
	1401	2406	HARV													
	1900	2400	BOUL													
	2046	2400	CULG													
05	0000	0745	CULG													
	0000	0006	HARV													
	0000	0030	BOUL													
	0738	1540	WEIS													
	1158	2157	SGMR													
	1400	1800	BOUL													
	1401	2400	HARV													
	2046	2400	CULG													
	2100	2400	BOUL													
06	0000	0030	BOUL													
	0000	0747	CULG													
	0000	0006	HARV													
	0738	1350	WEIS													
	1156	2159	SGMR													
	1356	1548	WEIS													
	1400	2400	BOUL													
	1401	2400	HARV													
	2046	2400	CULG													
07	0000	0007	HARV													
	0000	0030	BOUL													
	0000	0747	CULG							0109						IIIB,W
			CULG							0311	0311.5	1				IIIG,U
			CULG							0409						IIIB,W
			CULG							0714						IIIB,W
	0724	1549	WEIS													
			CULG							0743		1				IIIB
	1400	2400	BOUL							1503.9	1506.3	1	1503.9	1516.3	1	IIIG
	1401	2400	HARV							1715	1717	3	1716	1717	3	IIIGG
			BOUL							1715.6	1717.7	3	1715.6	1717.7	3	IIIG
	1155	2200	SGMR										1716.2	1717.1	1	III

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FEB. 1973	TIMES OF OBSERVATION		STATION	EVENTS														SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND					
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.			
07			BOUL							1815.5	1817.5	2	1815.5	1817.5	2			IIIG
			SGMR										1815.8	1816.5	2			III
			HARV				1816	1817	1	1815	1817	3	1816	1817	3			IIIGG,V
			HARV							1938	1940	2						IIIGG
			BOUL							1938.0	1939.8	1	1938.0	1939.8	1			IIIG
	2046	2400	CULG							2051.5	2052	1						IIIG
			BOUL							2051.7	2051.9	1	2051.7	2051.9	1			III
			CULG							2138	2139.5	1						IIIG,U
			CULG							2157.5		1						IIIB
			HARV				2158	2159	1	2158	2159	3	2158	2159	3			IIIG
			CULG							2158	2159	2						IIIG,V
			BOUL							2158.3	2158.5	1	2158.3	2158.5	1			III
			CULG							2239	2240.5	1						IIIG
			HARV							2239	2240	1						IIIG
			BOUL							2239.1	2239.4	1						III
			CULG							2339.5	2341	2						IIIG,U
			HARV							234C	2341	1						IIIG,U
			BOUL							2340.0	2341.8	1						IIIG
08	0000	0030	BOUL															
	0000	0008	HARV															
	0000	0747	CULG							0033	0721.5							IIIN,H
			CULG							0201.5	0202.5	2						IIIG
			CULG							0249	0249.5	1						IIIG
	0725	1555	WEIS															
	1154	2202	SGMR															
	1400	2400	BOUL															
	1442	2400	HARV															
	2046	2400	CULG							2311.5		1						IIIB
09	0000	0009	HARV															
	0000	0030	BOUL															
	0000	0747	CULG							0017	0017.5	1						IIIG
			CULG							0023.5	0024.5	1						IIIG
	0715	0833	WEIS															
	0848	1600	WEIS															
	1154	2203	SGMR															
	1400	2400	BOUL															
	1402	2400	HARV															
	2046	2400	CULG															
10	0000	0747	CULG															
	0000	0010	HARV															
	0000	0030	BOUL															
	1401	2400	HARV				1404	1412	1	1404	1428	1						IN
	1400	2400	BOUL										1421.5	1426.5	2	IIF		
			BOUL							1421.6	1447.2	2	1421.6	1447.2	2	IIH		
			HARV							1422	1428	2						UNCLF
	1152	2204	SGMR										1422.2	1446.2	2	II		
	0716	1600	WEIS							1427.7	1432.0	1				II		
			BOUL							1437.6	1439.1	1	1437.6	1439.1	1			IIIG
	2046	2124	CULG															
	2150	2400	CULG															
11	0000	0746	CULG															
	0000	0010	HARV															
	0000	0030	BOUL															
	0716	1150	WEIS															
	1151	2205	SGMR															
	1401	2400	HARV															
	1400	2400	BOUL							1742.8	1743.0	1	1742.8	1743.0	1			III
	2047	2400	CULG							2222								IIIB,W
			BOUL							2222.1	2222.3	1	2222.1	2222.3	1			III
			CULG							2316								IIIB,W
			CULG							2329	2329.5							IIIG,W
12	0000	0010	HARV															
	0000	0030	BOUL															
	0000	0746	CULG							0031.5	0032	1						IIIG
			CULG							0113.5	0114.5	1						IIIG
			CULG							0148.5	0149	1						IIIG
			CULG							0253	0254.5							IIIG,W
			CULG							0256	0257							IIIG,W
			CULG							0518	0518.5							IIIG,W
	0723	1602	WEIS															
	1149	2207	SGMR															
	1401	2400	HARV				2037	2039	1									IIIG
	2047	2400	CULG				2057	2057.5	1									FAST DRIFT
			CULG							2243	2244	1						IIIG
	1400	2400	BOUL							2243.4	2243.8	1	2243.4	2243.8	1			III
			CULG							2255	2257.5	1						IIIG
			BOUL										2255.2	2255.4	1			III
			BOUL										2256.5	2256.7	1			III
			BOUL							2257.4	2257.6	1	2257.4	2257.6	1			III
			CULG							2300.5	2354							IW
			BOUL							2322.0	2322.2	1	2322.0	2322.2	1			III
			BOUL							2326.1	2326.4	1	2326.1	2326.4	1			III
13	0000	0030	BOUL															
	0000	0010	HARV															

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				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
13	0000	0746	CULG							0003	0154.5					IN
			CULG				0055	0055.5	1	0054.5	0056.5	2	0055	0055.5	1	IIIG
			CULG							0102.5	0103.5	1	0103	0104.5	1	IIIG
			CULG							0512			0512			IIIB,W
	0712	1602	WEIS													
	1148	2208	SGMR													
	2047	2400	CULG							2047.5	2048.5	1				IIIB
	1700	2400	BOUL							2048.0	2048.4	1	2048.0	2048.4	1	III
			BOUL							2101.6	2102.1	1	2101.6	2102.1	1	IIIG
			CULG							2143	2144	1				IIIG
			BOUL							2143.4	2143.5	1	2143.4	2143.5	1	III
			CULG							2209.5	2210.5					IIIG,W
	1401	2400	HARV							2318	2320	2				IIIGG
			CULG				2318.5	2320	1	2318.5	2319.5	1				IIIG
14	0000	0011	HARV													
	0000	0030	BOUL													
	0000	0746	CULG							0300.5	0746					IS,W
			CULG				0414.5	0415	1							FAST DRIFT
	0713	0956	WEIS													
	1005	1608	WEIS							1221.5	1222.1	1				IIIG
	1146	2210	SGMR										1221.5	1222.5	1	III
			WEIS							1246.2	1247.3	2				IIIG
			SGMR										1247.0	1248.6	2	IIIG
			WEIS							1249.8	1252.1	1				IIIG
	1401	2400	HARV							1402	1724	1				IN
			WEIS							1407.5	1407.7	1				IIIG
	1400	2400	BOUL							1407.7	1408.1	1	1407.7	1408.1	1	IIIG
			SGMR										1407.7	1408.1	1	III
			BOUL							1523.2	1523.6	2	1523.2	1523.6	2	III
			BOUL										1544.7	1544.9	1	III
			BOUL							1638.8	1639.9	2	1638.8	1639.9	2	IIIG
			HARV							1639	1659	2	1639	1659	2	IIIN
			SGMR										1639.0	1639.6	1	III
			BOUL										1648.0	1648.3	1	III
			BOUL							1650.6	1651.6	1	1650.6	1651.6	1	IIIG
			SGMR										1650.8	1651.0	1	III
			BOUL							1657.9	1659.0	2	1657.9	1659.0	2	IIIG
			BOUL							1707.3	1707.4	1				III
			HARV							1724	2400	2				I
			HARV							1740	1741	3	1740	1741	3	IIIG
			SGMR										1740.0	1740.6	1	III
			BOUL							1740.1	1740.8	2	1740.1	1740.8	2	III
			BOUL							1740.2	2234.1	1	1740.2	2234.1	1	CONT
			HARV				1847	1848	1							IIIG
			BOUL							1901.5	1905.0	2	1901.5	1905.0	2	IIIG
			SGMR										1901.7	1909.3	2	IIIG
			HARV				1903	1904	1	1858	1906	2	1902	1905	3	IIIGG
			HARV							1908	1910	2	1909		3	IIIGG,V
			BOUL							1908.8	1910.4	2	1908.8	1910.4	2	IIIG
			HARV										1921	1931	2	I
			BOUL							1921.4	1922.3	2	1921.4	1922.3	2	IIIG
			HARV				1926	1930	2							I
			BOUL							1929.0	1930.2	2	1929.0	1930.2	2	IIIG
	2041	2400	CULG				2041	2400	1	2041	2400	1				IS
			CULG							2041	2042	1				IIIG
			HARV							2046	2047	1				IIIG
			CULG				2048	2052	1	2044	2052.5	2	2048.5	2051	1	IIIGG,V
			BOUL							2050.3	2057.4	3	2050.3	2057.4	3	IIIGG
			SGMR										2050.8	2056.8	2	IIIG
			HARV				2054	2058	2	2050	2057	3	2050	2057	3	IIIGG,V
			CULG							2107	2108.5	1				IIIG
			CULG							2111.5	2116	1				IIIGG
			HARV							2112	2113	2	2112	2113	2	IIIG
			BOUL							2112.5	2113.4	2	2112.5	2113.4	2	IIIG
			HARV							2117	2119	1				IIIG
			CULG							2122.5	2124	1				IIIG
			BOUL							2218.3	2218.4	2	2218.3	2218.4	2	IIIGG
			CULG				2212	2219.5	1	2210	2236.5	1				IIIS
			HARV				2212	2221	2	2216	2220	1				IIIGG
			HARV				2215	2308	1							IN
			BOUL							2220.2	2222.1	2	2220.2	2222.1	2	IIIG
			CULG							2225	2327	1				CONT
			BOUL							2234.1	2327.2	3	2234.1	2327.2	3	IV
			CULG							2252.5	2259	1				IIIGG
			CULG							2306	2312.5	2				IIIGG,V
			CULG				2306.5	2312.5	1							FAST DRIFT
			BOUL							2306.5	2308.9	3	2306.5	2308.9	3	IIIG
			HARV							2308	2309	3	2308	2309	2	IIIG
			HARV				2311		1	2311		1				IIIG
			CULG							2314	2318.5	1				IIIG
			HARV				2315	2317	1							IIIGG
			HARV				2321	2322	2							IIIGG
			CULG							2321	2328	1				IIIGG,V
			BOUL							2321.0	2327.3	2	2321.0	2327.3	2	IIIGG
			BOUL							2327.3	2400.0	1	2327.3	2400.0	1	CONT
			CULG							2334.5	2400					IIIN,W
			BOUL							2343.7	2346.1	1	2343.7	2346.1	1	IIIG
			BOUL							2351.1	2351.4	1	2351.1	2351.4	1	III
			BOUL							2352.8	2355.6	1	2352.8	2355.6	1	IIIGG

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				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
15	0000	0030	BOUL							0000	0015.0	1	0000	0015.0	1	CONT
			BOUL										0000	0030.7	1	III
	0000	0745	CULG				0000	0745	1	0000	0745	1				IS
			CULG							0001	0600					IIIN,W
	0000	0012	HARV							0000	0007	1				IN
			CULG				0202	0202.5	1	0201.5	0202.5	1				IIIG
			CULG							0217.5	0219	1				IIIG
			CULG							0226.5	0227.5	1				IIIG
			CULG							0303	0306.5	1				IIIG
			CULG							0320	0321.5	1				IIIG
	0706	1616	WEIS													
	1400	2400	BOUL							2026.1	2026.3	1	2026.1	2026.3	1	III
	2053	2400	CULG							2053	2111					IN
			CULG							2111.5	2112.5	2				IIIG
	1401	2400	HARV							2112	2113	2	2112	2113	2	IIIG
			BOUL							2112.2	2113.0	2	2112.2	2113.0	2	III
	1145	2211	SGMR										2112.3	2112.6	1	III
			CULG							2114.5		1				IIIB
			BOUL										2221.5	2221.8	1	III
			CULG							2222.5						IIIB,W
16	0000	0012	HARV													
	0000	0747	CULG							0017	0018.5	2				IIIG
			CULG							0056.5	0722					IIIN,W
			CULG							0052.5	0053	2				IIIG
			CULG							0357	0747	1				IS
			CULG							0455.5	0456	1				IIIG
			CULG							0641.5	0642.5	1				IIIG
	0718	1153	WEIS							0907.5	0907.8	1				IIIG
	1203	1607	WEIS													
	0000	0030	BOUL										1553.7	1554.2	1	IIIG
	1400	2400	BOUL							1611.5	1611.6	1	1611.5	1611.6	1	III
	1401	2400	HARV							1623	1752	1				IN
			BOUL							1629.9	1634.4	1	1629.9	1634.4	1	IIIG
			HARV							1806	1807	3	1806	1807	3	IIIG,U
			BOUL							1806.4	1806.7	2	1806.4	1806.7	2	III
	1133	2212	SGMR										1806.5	1806.9	2	III
			BOUL							1843.8	1849.2	1	1843.8	1849.2	1	III
			BOUL							1847.9	1848.3	1	1847.9	1848.3	1	III
			SGMR										1847.9	1848.4	1	III
			HARV							1852	1859	3	1852	1858	3	IIIGG,V,U
			BOUL							1852.6	1859.5	2	1852.6	1859.5	2	IIIGG
			SGMR										1852.7	1858.2	2	IIIG
			BOUL							1904.9	1921.5	3	1904.9	1921.5	3	II
			HARV							1905.2	1933	2	1912	1935	1	II
			SGMR										1906.5	1917.2	2	II
			BOUL							1908.7	1938.5	3	1908.7	1938.5	3	II
			HARV				1912	1928	1							IIIGG
			BOUL							1912.2	1912.9	3	1912.2	1912.9	3	III
			BOUL							1915.0	2003.7	1	1915.0	2003.7	1	IV
	2046	2400	CULG							2231.5						IIIB,W
17	0000	0012	HARV													
	0000	0100	BOUL													
	0000	0747	CULG							0540.5						IIIB,W
	0930	1609	WEIS													
	1135	2204	SGMR													
	1400	2400	BOUL							1522.8	1523.2	1	1522.8	1523.2	1	III
			BOUL							1818.7	1823.0	1	1818.7	1823.0	1	IIIGG
	1401	2400	HARV							1819	1823	2	1820	1822	1	IIIG
			BOUL							2040.8	2041.3	1				IIIGG
			BOUL							2043.8	2044.2	1	2043.8	2042.2	1	III
	2046	2400	CULG							2046	2051.5					IIIGG,W
18	0000	0746	CULG													
	0000	0013	HARV													
	0000	0100	BOUL													
	1121	2214	SGMR													
	1401	2400	HARV							1852	1855	1				IIIG
	1330	2400	BOUL							1853.1	1855.0	1	1853.1	1855.0	1	IIIG
			BOUL							1900.7	1900.9	1	1900.7	1900.9	1	III
			BOUL							1921.7	1921.9	1	1921.7	1921.9	1	III
	2046	2400	CULG							2122.5	2159	1				IVP
			HARV				2123	2150	2	2123	2150	2				IVP
			BOUL										2125.5	2125.9	1	III
			BOUL										2138.8	2139.4	1	IIIG
			BOUL							2139.5	2144.2	1	2139.5	2144.2	1	IIIG
			BOUL										2147.6	2150.9	2	IIIG
			CULG							2149	2150					IIIG,W
			BOUL										2152.4	2201.8	1	II
			CULG							2153	2155.5	1				IIIG
19	0000	0014	HARV													
	0000	0100	BOUL													
	0000	0746	CULG				0600	0601								IIIG,W
			CULG				0604.5		1							IIIG
			CULG				0616									IIIB,W
			CULG							0737	0738	1				IIIG
	0795	1438	WEIS													
	1126	2216	SGMR													

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FEB. 1973	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
19	1330	2400	BOUL													
	1402	2400	HARV													
	2046	2400	CULG													
20	0000	0015	HARV													
	0000	0100	BOUL													
	0000	0746	CULG							0316.5	0317					IIIG,W
	1057	1616	WEIS													
	1117	2217	SGMR													
	1346	2400	HARV													
	1554	2400	BOUL													
	2046	2112	CULG													
	2121	2400	CULG													
21	0000	0015	HARV													
	0000	0100	BOUL													
	0000	0725	CULG							0358.5		1				IIIB
	0902	1607	WEIS													
	1117	2218	SGMR													
	1330	2400	BOUL													
	1346	2400	HARV													
	2046	2400	CULG													
22	0000	0746	CULG													
	0000	0016	HARV													
	0000	0100	BOUL													
	0930	1618	WEIS													
	1128	2228	SGMR													
	1347	2400	HARV													
	1640	2400	BOUL													
	2046	2400	CULG													
23	0000	0746	CULG													
	0000	0017	HARV													
	0000	0100	BOUL													
	0700	1304	WEIS													
	1218	2221	SGMR													
	1309	1622	WEIS													
	1346	2400	HARV							1356	2400	1				IN
	1600	2400	BOUL													
	2045	2400	CULG													
24	0000	0018	HARV													
	0000	0100	BOUL													
	0000	0745	CULG				0653.5	0654	1	0653.5	0654	1	0653.5	0654.5	1	IIIG
			CULG							0655.5						IIIB,W
	0656	1622	WEIS													
	1110	2222	SGMR													
	1347	2400	HARV				1552	1556	1							IIIGG
	1330	2400	BOUL							1748.0	1748.2	1	1748.0	1748.2	1	III
	2045	2400	CULG							2059	2059.5	1				IIIG
			CULG							2100.5						IIIB,W
			CULG				2223	2224	1	2223	2231.5	1				IIIG
			HARV				2223	2225	2	2223	2225	2				IIIGG
			BOUL							2223.6	2223.9	1				IIIG
			HARV				2230	2231	1	2230	2231	1				IIIGG
			CULG							2235						IIIB,W
			CULG							2238	2239					IIIG,W
			CULG							2240						IIIB,W
			CULG							2331	2331.5					IIIG,W
			HARV				2331		2	2331		2				IIIG
25	0000	0019	HARV													
	0000	0100	BOUL													
	0000	0614	CULG							0121	0121.5					IIIG,W
			CULG							0229.5	0230.5	1				IIIG
	0657	1421	WEIS													
	1113	2224	SGMR													
	1330	2400	BOUL													
	1347	2400	HARV							1645	1646	2				IIIGG
	2045	2400	CULG													
26	0000	0745	CULG													
	0000	0021	HARV													
	0000	0100	BOUL													
	0714	1627	WEIS							0946.5	0947.1	2				IIIG
	1102	2225	SGMR													
	1330	2400	BOUL													
	1346	2400	HARV				2010	2013	1	2010	2013	2				IIIGG
	2045	2400	CULG													
27	0000	0022	HARV													
	0000	0100	BOUL													
	0000	0742	CULG							0137	0138					IIIG,W
	1058	2227	SGMR													
	0655	1625	WEIS							1336.5	1336.7	1				IIIB
	1330	2400	BOUL							1706.2	1706.4	1				III
	1347	2400	HARV				1707	1708	1							IIIGG,RS
			HARV				1852	1854	1							IIIGG,RS
			HARV				1902	2122	1	1902	2122	1				IN

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

FEBRUARY 1973

FEB. 1973	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
28	0000	0100	BOUL										0002.9	0003.4	1	III
	0000	0022	HARV				0005	0019	1	0003	0021	1				I
	0000	0744	CULG							0041.5	0042.5	1				IIIG
			CULG				0240.5	0243.5	1	0240	0243.5	1	0241	0243.5	1	IIIGG,U
			CULG							0348.5	0350	1				IIIG
			CULG				0410.5	0414	1	0410.5	0414.5	2				IIIGG,U
			CULG							0455.5						IIIB,W
			CULG							0457.5	0458.5	1				IIIG
			CULG							0518		1				IIIB
			CULG				0531	0732.5	1	0543.5	0659	1				I
			CULG							0638		1				IIIB
	0700	0830	WEIS													
			CULG							0733	0734.5	1				IIIG
			CULG							0739	0741	1				IIIG
	0833	1630	WEIS							0835.0	0836.0	1				IIIB
			WEIS							1046.9	1047.2	1				IIIG
	1330	2400	BOUL							1342.0	1620.9	2	1342.0	1620.8	2	IV
	1346	2400	HARV							1348	1622	1				I
	1110	2227	SGMR										1353.0	1537.5	1	IV
			BOUL										1548.1	1548.3	1	III
			BOUL							1558.6	1608.8	1	1608.6	1608.8	1	IIIG
			HARV							1609	1611	2	1609	1611	2	IIIGG
			BOUL							1609.2	1610.6	2	1609.2	1610.6	2	III
			WEIS							1609.3	1610.5	2				IIIG
			SGMR										1609.6	1621.5	2	IIIG
			BOUL							1620.6	1620.9	1	1620.6	1620.9	1	IIIG
			HARV							1622	1900	1				IN
			HARV				1733	1736	3	1733	1734	3	1733	1734	3	IIIGG,V
			BOUL							1733.0	1735.9	2	1733.0	1735.9	2	IIIG
			SGMR										1733.0	1735.2	3	V
			SGMR										1743.4	1744.2	1	III
			BOUL							1743.5	1743.8	2	1743.5	1743.8	2	III
			BOUL										1802.8	1803.0	1	III
			BOUL							1825.7	1825.9	1	1825.7	1825.9	1	III
			HARV							1900	2258	2				I
	2045	2400	CULG							2045	2400	1				IS
			CULG							2102.5	2103.5	1				IIIG,U
			BOUL							2102.9	2103.4	1	2102.9	2103.4	1	III
			HARV							2103		2				U
			BOUL							2139.1	2139.4	1				III
			HARV				2154	2158	3	2156	2208	2	2157	2208	2	IIIGG,V
			CULG				2155	2157.5	1	2156.5	2158.5	1				IIIGG
			BOUL							2156.9	2158.8	2	2156.9	2158.8	2	IIIG
			HARV				2158	2208	2							IIIGG
			BOUL							2200.2	2200.3	1				III
			BOUL							2200.8	2208.2	2	2200.8	2208.2	2	IIIGG
			CULG				2201	2202	1	2159.5	2208.5	1	2201	2208	1	IIIGG,V
			CULG							2211	2220	1				II
			BOUL							2211.3	2218.8	2	2211.3	2218.8	2	IIF
			BOUL							2211.4	2220.5	2	2211.4	2220.5	2	IIH
			HARV							2211.5	2220	2	2217	2219	1	II
			BOUL							2220.0	2350.0	1	2220.0	2350.0	1	IV
			HARV							2258	2400	1				IN
			BOUL										2303.5	2313.8	1	III
			BOUL										2350.2	2350.8	1	III

The symbols used in connection with the spectral type in describing the important bursts are as follows:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of bursts
C = Underlying continuum (particularly with type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity

SELECTED SOLAR EVENTS

FEBRUARY 1973

Culgoora

UT Date FEB · 1973	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
Feb 3	0143	0144	160	1.1	20	0	1	IIIG	
	0430	0432	80	1.2	0	0	1	IIIG	
8	0201	0202)	(80	1.0	50)	0	1	IIIG	
	0248	0250)	(160	0.8	50)		1		
9	0016	0017)	(80	1.0	60)	0	1	IIIG	
	0023	0024)	(160	0.7	60)		1		
12	0031	0032)	(80	1.0	320)	0	1	IIIG	
	0113	0115)	(160	0.7	310)		1		
13	0054	0056)	(80	1.0	300)	0	1	IIIG	
	0103	0104)	(160	0.8	290)		1		
15	2324	2325	(80	1.3	300	-	1	IIIG	(Polariz'n not (recorded. Many (other similar (events recorded (up to 0320
			(160	1.1	300				
16	0017	0019	80	0.8	0	0	1	IIIG	
	0052	0053	(80	0.0	0)	0	1	IIIG	
			(160	0.0	0)				
25	0120	0123	(80	1.3	70	0	2	IIIG	
			(160	1.1	70	ℓ	1	I	
	0228	0232	(80	1.3	70)	0	1	IIIG	
			(160	1.1	80)				
28	0240	0243	(80	1.0	0)	0	.2	IIIGG,U	(Complex source (structure
			(160	0.7	0)				

Days without Heliograph observations: ..7,..14.....

COSMIC RAY INDICES
(Neutron Monitors)

FEBRUARY 1973

Feb. 1973	CHURCHILL DAILY AVERAGE COUNTS PER HOUR	DEEP RIVER DAILY AVERAGE COUNTS PER HOUR	CALGARY DAILY AVERAGE COUNTS PER HOUR	SULPHUR MT. DAILY AVERAGE COUNTS PER HOUR	CLIMAX DAILY AVERAGE COUNTS PER HOUR	DALLAS DAILY AVERAGE COUNTS PER HOUR
1	data not available at time of publication	data not available at time of publication	11914.2	8907.9	data not available at time of publication	6404.0
2			11916.2	8893.7		6387.8
3			11888.0	8893.6		6392.6
4			11897.6	8953.1		6420.8
5			11978.0	8987.7		6427.0
6			11889.4	8914.0		6393.8
7			11840.2	8868.4		6353.2
8			11811.4(23)	8866.7		6369.9
9			11817.2	8895.6		6393.3
10			11785.0	8893.4		6368.3
11			11788.7	8891.3		6357.7
12			11823.1	8904.8		6337.9
13			11902.3	8926.8		6347.9(23)
14			11878.6	8901.9		6381.6
15			11837.9	8861.0		6373.8
16			11777.8	8814.3		6373.6
17			11723.1	8755.4		6310.7
18			11619.3	8657.6		6252.5
19			11618.4	8629.4		6241.7
20			11512.8	8562.6		6195.8
21			11523.8	8558.6		6207.2
22			11527.2	8584.9		6257.9
23			11542.0	8606.9		6249.8
24			11613.7	8681.2		6257.4
25			11658.7	8726.6		6275.5
26			11695.5	8749.7		6297.2
27			11679.5	8762.3(23)		6319.5
28			11720.9	8760.6		6302.0

( ) Number of hours for which data are available if less than 24 (or number of section hours if less than 40 for Climax).

Churchill and Dallas Super Neutron Monitors, Scaling Factors 120.

Deep River Super Neutron Monitor, Scaling Factor 300.

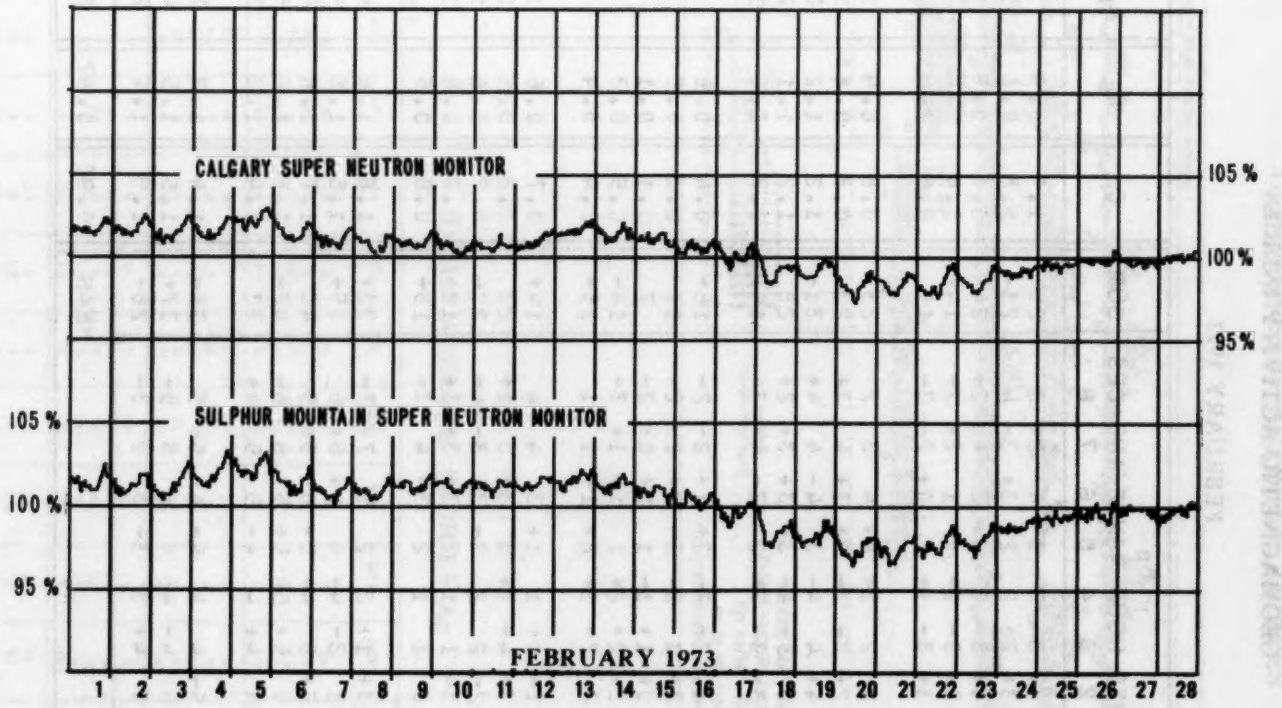
Calgary and Sulphur Mountain Super Neutron Monitors, Scaling Factors 100.

Climax IGC Station B305, Scaling Factor 100.

COSMIC RAY INDICES

(Pressure Corrected Hourly Totals)

FEBRUARY 1973

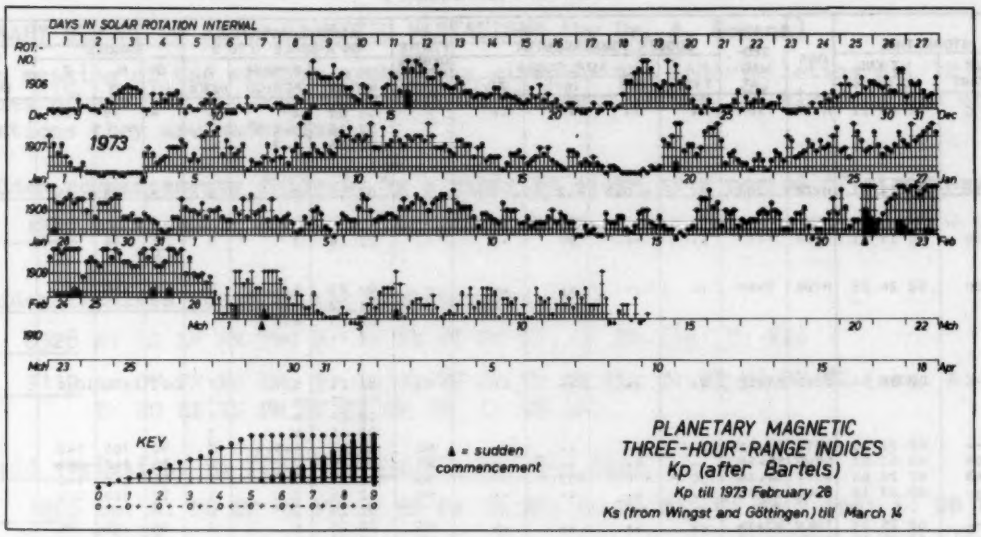

CALGARY SUPER NEUTRON MONITOR
105 %
100 %
95 %
SULPHUR MOUNTAIN SUPER NEUTRON MONITOR
105 %
100 %
95 %
FEBRUARY 1973
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

GEOMAGNETIC ACTIVITY INDICES

FEBRUARY 1973

DAY		K_p THREE-HOUR RANGE INDICES								SUM	C_i	C_p	A_p
		1	2	3	4	5	6	7	8				
1		4	3+	3	3	3-	4-	2+	3	25	1.0	0.9	17
2		3	3+	2+	2	2	3+	3-	4	23-	0.8	0.8	14
3		2+	4+	3-	3	3+	2	4	2+	24	0.8	0.9	16
4	QQ	2	2+	3-	2-	1-	1	2+	2-	14+	0.4	0.4	7
5	Q	3	3+	3-	1+	1	0+	2-	3-	16	0.6	0.5	9
6		2+	2	2	3+	4+	4	3	2	23	0.8	0.9	15
7		2+	2+	3-	3-	2+	3+	4	3+	23	0.8	0.8	14
8		4-	4+	4	4-	3	4-	4	4+	31-	1.2	1.2	25
9		4-	3	5-	4-	3+	3+	3+	2+	28	1.2	1.1	21
10		1+	3-	3-	2+	2	2-	4-	3	19+	0.7	0.6	11
11	QQ	3	3	2-	2-	2+	1+	2-	2-	16+	0.4	0.5	8
12	Q	2-	2+	3	2-	3-	2+	2-	2-	17	0.3	0.5	9
13	QQ	0+	0+	1+	1-	1	0+	0+	3-	7	0.1	0.1	4
14	QQ	2-	2-	2+	2+	1	1-	1+	3-	14-	0.5	0.3	7
15	QQ	3	3	2-	1+	2+	1+	1	1	15-	0.4	0.4	8
16	Q	0	1-	0+	1	1+	3	4	4	14+	0.7	0.6	10
17		5-	3+	4-	1+	3	3-	3	1+	23	0.8	0.9	16
18		2	2-	2	2	3-	3	3-	4-	20-	0.7	0.6	11
19	Q	3	3-	1	1	2	3-	3-	3+	18+	0.7	0.6	10
20	Q	1+	0	1	1	2	3-	4	3-	15-	0.5	0.5	9
21	D	5-	3+	1+	2	2	5	7+	7-	32+	1.6	1.6	49
22	D	6+	2	3-	4-	4	4+	6+	6	35+	1.6	1.5	46
23	D	5-	5+	5	4+	5-	6-	5+	5	40	1.7	1.6	48
24	D	4+	5	5+	5-	5+	5+	6	6-	42-	1.6	1.6	54
25		3-	4	4+	4	4-	5	5	4+	33	1.4	1.3	31
26		5	5-	4	4	4-	4-	5-	5	35-	1.4	1.3	34
27	D	4+	6	4-	4-	4	6	5	5-	37+	1.5	1.5	44
28		5	3	4+	3	3-	3	2	3-	26-	0.9	1.0	20
										MEAN	0.90	0.87	20

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

	1972										1973	
DAY	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
1	8	17	18	6	5	10	5	7	98	6	11	17
2	10	11	18	6	7	5	6	5	42	5	2	14
3	16	4	7	12	7	5	5	4	13	6	2	16
4	8	17	5	13	4	132	6	7	6	4	11	7
5	5	17	6	11	3	182	5	2	3	2	21	9
6	26	8	9	7	4	67	10	2	7	3	20	15
7	45	8	3	8	10	20	5	8	7	10	8	14
8	12	6	4	6	10	9	9	4	7	6	15	25
9	10	3	14	4	6	74	8	4	7	4	16	21
10	3	5	9	4	7	18	15	6	4	2	28	11
11	7	6	7	4	6	17	11	19	7	3	24	8
12	3	10	9	3	7	7	5	21	6	8	25	9
13	7	12	8	4	3	5	53	21	4	30	16	4
14	4	7	7	10	3	9	54	26	4	9	8	7
15	5	6	38	11	6	10	24	8	17	29	9	8
16	20	6	18	8	8	6	19	12	31	33	8	10
17	16	6	9	62	8	6	26	2	12	13	5	16
18	11	24	10	126	5	13	14	11	9	8	3	11
19	5	10	4	19	8	14	6	34	11	7	10	10
20	5	8	4	9	5	15	4	14	27	4	29	9
21	5	19	4	5	3	15	2	16	9	2	22	49
22	10	10	5	12	10	8	4	13	13	14	5	46
23	8	8	7	11	10	3	13	18	11	30	13	48
24	20	5	5	14	17	2	16	11	5	13	22	54
25	8	3	5	8	33	5	6	6	8	4	20	31
26	10	3	8	10	17	18	7	8	14	5	20	34
27	19	7	8	17	9	25	8	7	11	2	33	44
28	11	22	22	13	5	8	8	11	12	4	33	20
29	22	42	10	11	4	8	25	21	9	15	22	
30	27	17	14	3	4	6	8	20	4	19	15	
31	15		12		6	7		29		13	6	
MEAN	12	11	10	14	8	24	13	12	14	10	16	20

PRINCIPAL MAGNETIC STORMS

FEBRUARY 1973

DATE 1973 MO DA	STORM TIME UT START	STORM TIME UT END MO DA HR	OBS	GEO-MAG LAT.	SUDDEN COMMENCEMENT TYPE	AMPLITUDES D(')	AMPLITUDES H(γ)	AMPLITUDES Z(γ)	C FIGURE DEGREE OF ACTIVITY	MAXIMAL ACTIVITY ON K-SCALE 0 TO 9 MO DA	3-HOUR PERIOD	K INDEX	RANGES D (')	RANGES H (γ)	RANGES Z (γ)	STORM NUMBERS
02 05	1800	02 06 21	HYDE	7.6N	..	..	..	..	-	02 05	8	3	4	98	24	8
										02 06	3,4,5					8
										02 06	6,7					8
02 13	2118	02 14 21	HYDE	7.6N	SC	- 0.3	+12	- 1	-	02 13	8	3	3	63	19	9
02 16	1130	02 17 21	HYDE	7.6N	..	..	..	..	-	02 16	7	5	1	74	9	10
02 20	1900	02 24 23	HYDE	7.6N	..	..	..	..	-	02 21	6,7,8	5	5	155	24	11
										02 22	6,7,8					11
										02 23	6,7					11
										02 24	5,6					11
02 21	09--	02 28 16	COLL	64.6N	..	..	..	..	MS	02 21	6,7	7	307	1870	1040	11
										02 23	6	7				11
										02 24	4	7				11
										02 25	4	7				11
	16--	02 28 15	SITK	60.0N	..	..	..	..	MS	02 23	4,5,6	7	90	700	540	11
	1609	03 01 01	NEWP	55.1N	..	..	..	..	MS	02 24	2	6	51	242	261	11
	1843	02 28 04	WITT	54.1N	SC *	+ 6	+33 *	0	MS	02 21	7	7	50	240	140	11
	16--	03 03 16	BOUL	49.0N	..	..	..	..	MS	02 24	2	6	28	180	100	11
										02 27	2	6				11
	16--	02 25 02	IRKU	40.8N	..	..	..	..	MS	02 23	6	7	36	145	84	11
	16--	02 28 10	TUCS	40.4N	..	..	..	..	MS	02 22	1	6	22	180	35	11
	1600	02 22 03	SJUA	29.9N	..	..	..	..	MS	02 21	7	6	6	129	54	11
	03--	02 24 23	ALIB	9.5N	..	..	..	..	MS	02 21	6	6	5	151	28	11
										02 22	7	6				11
	1605	02 24 21	GUAM	4.0N	..	..	..	..	M	02 22	8	5	0	60	10	11
	03--	02 24 23	ANNA	1.5N	..	..	..	..	MS	-- --	-	-	4	170	59	11
	03--	02 24 23	TVAN	1.1S	..	..	..	..	MS	-- --	-	-	3	194	126	11
	15--	02 25 03	APIA	16.1S	..	..	..	..	M	02 21	7	5	7	155	28	11
	16--	02 28 16	PMOR	18.6S	..	..	..	..	MS	02 22	8	6	9	110	60	11
	1843	02 22 03	HRMN	33.3S	SC	5	22	23	MS	02 21	6,7	6	27	87	124	11
	16--	02 28 17	GNAN	43.2S	..	..	..	..	MS	02 22	7	7	28	150	180	11
	1600	02 28 15	TOOL	46.7S	..	..	..	..	MS	02 21	7,8	6	34	220	56	11
	1843	02 23 --	KGLN	57.3S	SC	--	--	--	S	02 21	7	9	--	--	--	11
										02 22	7	9				11
02 22	15--	02 28 11	FRED	49.6N	..	..	..	..	M	02 22	7,8	5	34	147	76	11
										02 23	2,6	5				11
										02 24	1,2,8	5				11
										02 26	1,2	5				11
										02 27	2,6	5				11
										02 28	1	5				11
	1202	02 24 23	SJUA	29.9N	..	..	..	..	MS	02 22	7	6	8	144	34	11
	1500	02 28 03	HRMN	33.3S	..	..	..	..	MS	02 22	7,8	6	41	128	190	11
02 25	06--	02 28 17	IRKU	40.8N	..	..	..	..	M	02 25	6,7	5	17	138	33	11
										02 26	8	5				11
										02 27	2,5,6,7	5				11
	04--	02 26 23	ALIB	9.5N	..	..	..	..	M	02 25	6	5	2	71	20	11
										02 26	7,8	5				11
	04--	02 26 23	ANNA	1.5N	..	..	..	..	M	-- --	-	-	2	82	57	11
	04--	02 26 23	TVAN	1.1S	..	..	..	..	M	-- --	-	-	2	99	72	11

Reports were received from the following observatories:

College Witteveen Fredericksburg Irkutsk San Juan Hyderabad Annamalainagar Apia Hermanus Toolangi
Sitka Newport Boulder Tucson Alibag Guam Trivandrum Port Moresby Gnangara Port-aux-Franais

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

FEBRUARY 1973

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romana)

The meaning of the station symbols is given in the IAGA-Bulletins nr. 12 and 32. Times of ssc, si and bay-commencements are mean values. If given by ten or more stations they are underlined.

Sudden commencements followed by a magnetic storm or a period of strominess (ssc)

21 1842 A: WN LG AQ TL LM; B: WI NI IK CI SZ; C: KS (si: A: FU; B: OT - bps: C: EB)

Sudden impulses found in the magnetograms (si)

05 0528 A: LG LM AM TW; B: IK EB SZ PM PP; C: TL (bp: C: VI)

13 2119 A: OT FR HU LM; B: DO SI WN DB FU AQ TL; C: WI KA SS SZ (ssc: A: VI LG; B: SO EB KS PM PP GN AM TW; C: NI IK)

Rapid variations in form of bays (b, bs, bp, bps)

03 1806 bp: A: SO DO WN FU LG EB CI TL SZ; B: WI NI; C: KA - bps: A: DB IK LM; C: GN

04 1954 bs: A: KS; B: SO - bp: A: LG IK; B: WN FU AQ EB CI TL; C: NI LM

07 1745 bs: B: SO - bp: A: IK; B: WN DB EB TL LM; C: KA - bps: B: NI

10 2013 bs: A: SO KS - bp: A: WN FU CI TL; B: WI AQ EB LM - bps: A: LG IK SZ; B: DO NI

18 2127 bs: A: KS - bp: A: FU LG TL; B: WN DB AQ EB CI LM - bps: A: SO IK SZ; C: NI

27 1723 bp: A: WN SZ; B: EB CI LM; C: KA - bps: A: TL GN; B: IK SS

Giant pulsations (pg)

06	1027 -	AMA	09	1356 - 1415	WN
07	1027 -	AMA	21	1843 - 2343	DBA

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

01	0853 - 0903	SZ	03	1027 - 1036	SZ
01	1129 - 1138	SZ	12	1337 - 1347	SZ
02	1204 - 1218	SZ	27	0938 - 0947	HB (si: B: TL)

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

FEBRUARY 1973

North Atlantic

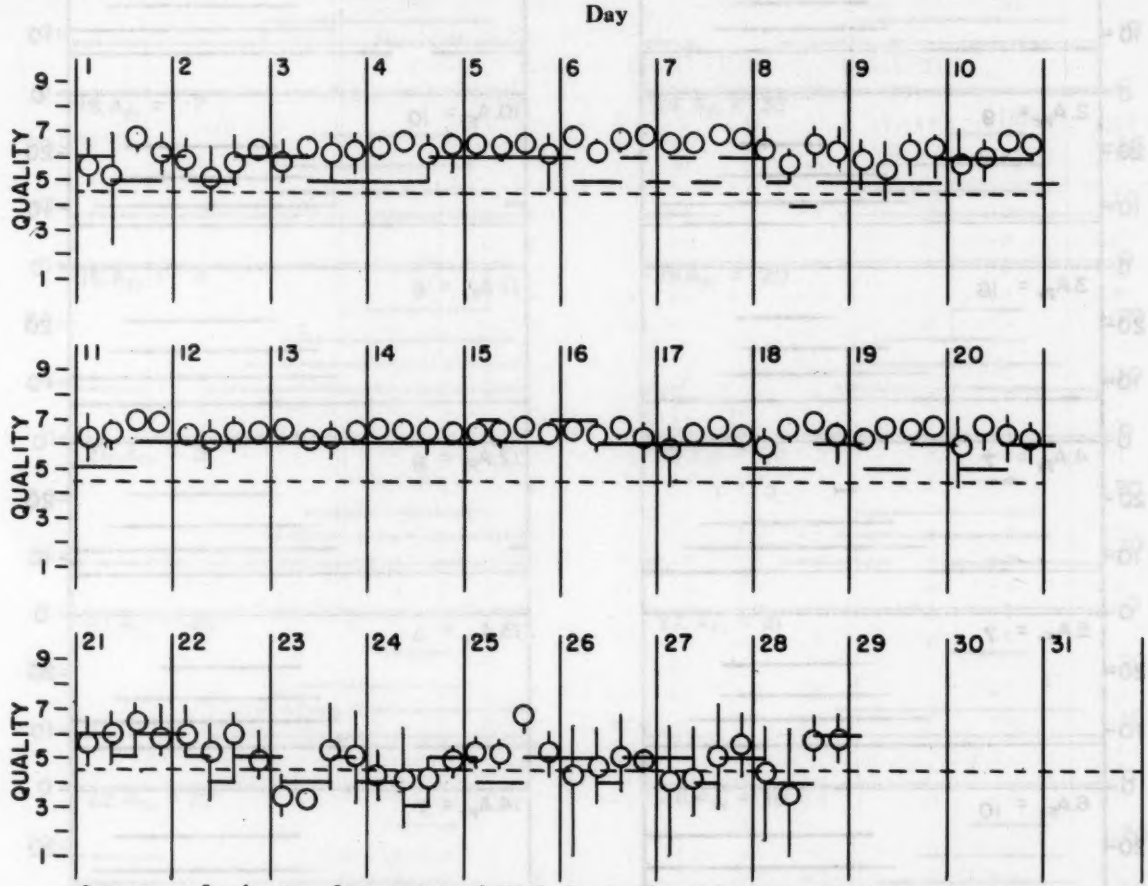
FEB. 1973	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC								GEOMAGNETIC INDICES		
			6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF				K_{FR}		A_{FR}
			00 TO 06	06 TO 12	12 TO 18	18 TO 24	02	08	14	20	HALF DAY (1)	HALF DAY (2)	OBSERVED
01	6o	6	6-	5o	7-	6o	6	5	5	6	3	2	12
02	6-	6	6-	5o	6-	6+	5	5	6	6	2	2	9
03	6o	6	6-	6+	6o	6+	6	5	5	5	3	3	16
04	6+	6	6+	7-	6o	6+	5	5	6	6	2	2	7
05	6+	6	7-	6+	7-	6o	6	6	6	6	2	1	7
06	7-	5	7-	6+	7-	7-	5	5	6	5	2	3	10
07	7-	5	7-	7-	7o	7-	6	5	6	6	3	3	12
08	6+	5	6+	6-	7-	6+	5	4	5	5	(4)	3	21
09	6o	5	6o	6-	6+	6+	5	5	5	6	3	3	16
10	6+	6	6-	6o	7-	7-	6	6	6	5	2	2	10
11	7-	6	6+	6+	7o	7o	5	5	6	6	2	1	6
12	6+	6	6+	6o	7-	7-	6	6	6	6	2	2	8
13	6+	6	7-	6o	6+	7-	6	6	6	6	1	2	4
14	7-	6	7-	7-	7-	7-	6	6	6	6	2	1	7
15	7-	6	7-	7-	7-	6+	7	6	6	7	2	1	7
16	7-	6	7-	6+	7-	6+	7	6	6	6	1	3	8
17	6+	6	6-	7-	7-	6+	6	6	6	5	3	2	13
18	7-	6	6o	7-	7o	6+	5	5	6	6	2	2	7
19	7-	6	6+	7-	7-	7-	5	5	6	6	2	2	8
20	6+	6	6o	7-	6+	6+	5	5	6	6	1	2	5
21	6o	6	6-	6o	6+	6-	6	5	6	6	3	(4)	25
22	6-	6	6o	5+	6o	5o	5	4	5	5	3	(4)	27
23	4+	5	3+	3+	5+	5o	4	4	5	4	(4)	(4)	27
24	4+	5	4+	4o	4o	5o	4	3	5	5	(5)	(4)	33
25	6-	5	5+	5+	7-	5+	4	4	5	5	3	(4)	20
26	5-	6	4+	5-	5o	5o	5	4	5	5	(4)	(4)	28
27	5-	6	4o	4o	5o	6-	5	4	5	5	(4)	(4)	31
28	5o	6	4+	3+	6-	6-	4	4	6	6	3	3	16

FEBRUARY 1973

North Atlantic

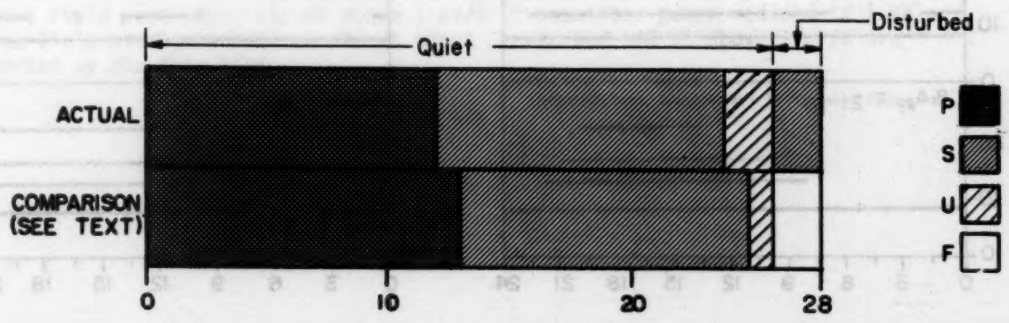
– Short term forecast
o Quality figure

1 range of reports



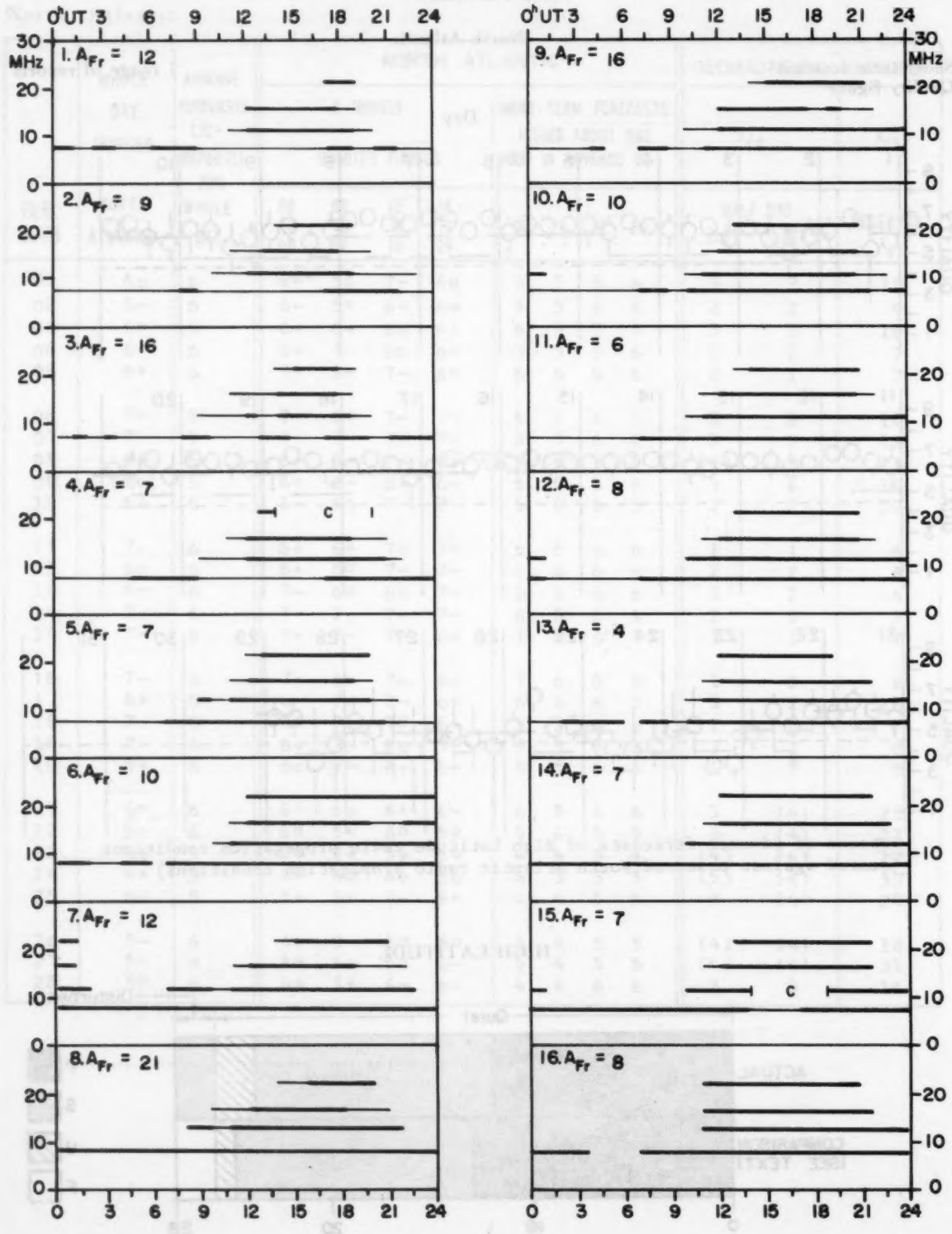
Outcome of advance forecasts of High Latitude radio propagation conditions (scored against observed North Atlantic radio propagation conditions)

HIGH LATITUDE



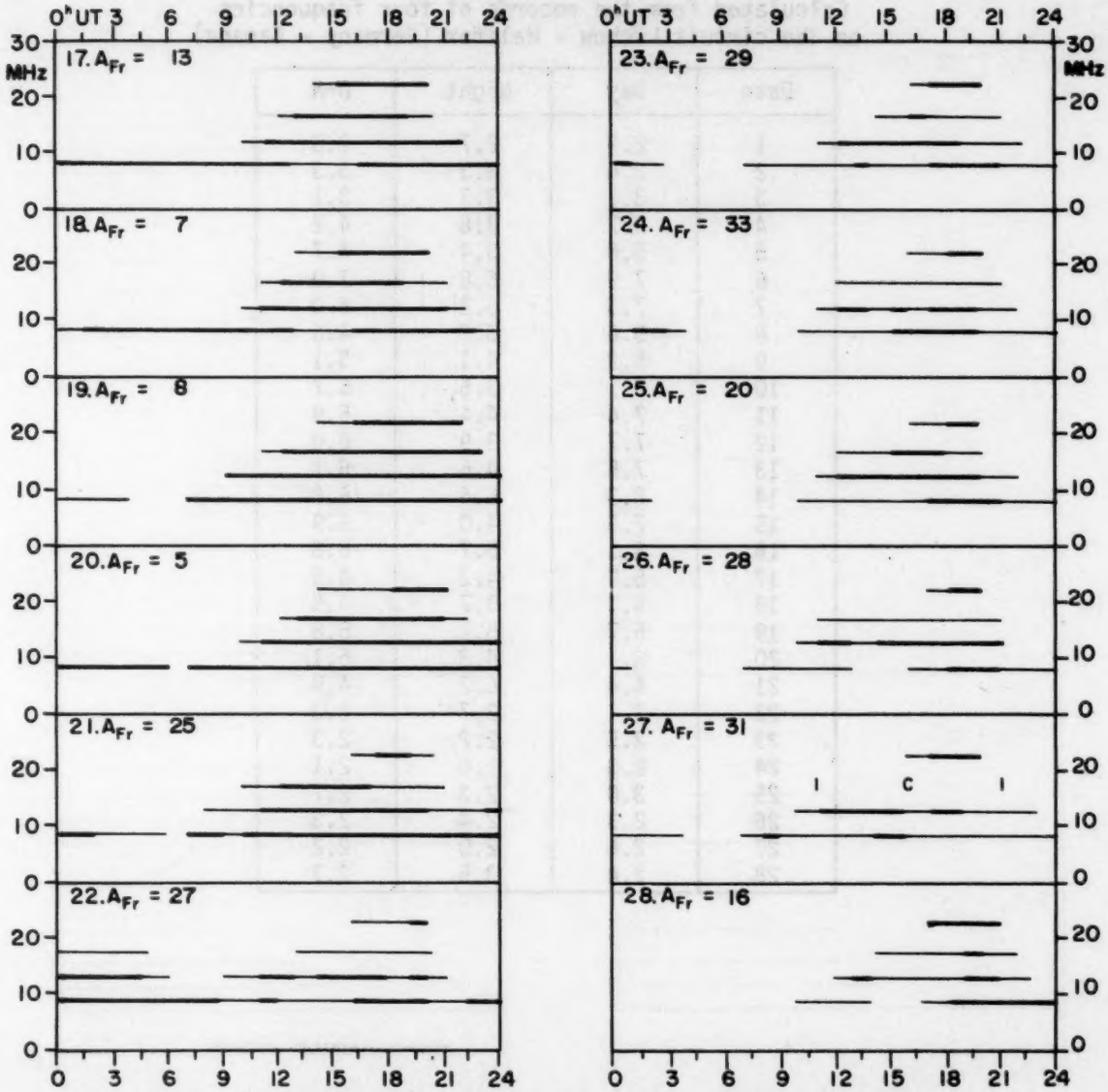
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

FEBRUARY 1973



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

FEBRUARY 1973



Field strengths from four frequencies, 8.542, 12.813, 17.084 and 22.378 MHz, as observed on a Lüchow - Halifax circuit are represented above. Heavy solid lines represent field strengths ≥ -12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represneted by the fine line.

Adapted from Observations by Deutsche Bundespost

RADIO PROPAGATION QUALITY INDICES

February 1973

Calculated from the records of four frequencies
on the circuit Lüchow - Halifax (Germany - Canada)

Date	Day	Night	D+N
1	2.9	2.7	2.8
2	3.4	3.3	3.3
3	3.1	3.3	3.1
4	4.7	3.6	4.2
5	5.6	3.4	4.7
6	7.9	6.8	7.0
7	7.3	5.2	6.3
8	5.6	3.2	4.6
9	6.2	4.1	5.1
10	7.1	3.6	5.7
11	7.4	4.4	5.9
12	7.7	3.9	6.0
13	7.5	4.6	6.1
14	8.3	5.4	6.8
15	7.5	4.0	5.9
16	8.1	5.7	6.8
17	5.0	4.2	4.5
18	5.1	3.7	4.5
19	6.7	5.2	5.8
20	6.1	4.3	5.1
21	4.4	6.2	4.9
22	2.1	2.7	2.3
23	2.5	2.2	2.3
24	2.3	1.8	2.1
25	3.0	2.3	2.7
26	2.3	2.4	2.3
27	2.6	2.0	2.2
28	2.4	3.5	2.7

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SOLAR-GEOPHYSICAL DATA (comprehensive reports)

U. S. DEPARTMENT OF COMMERCE
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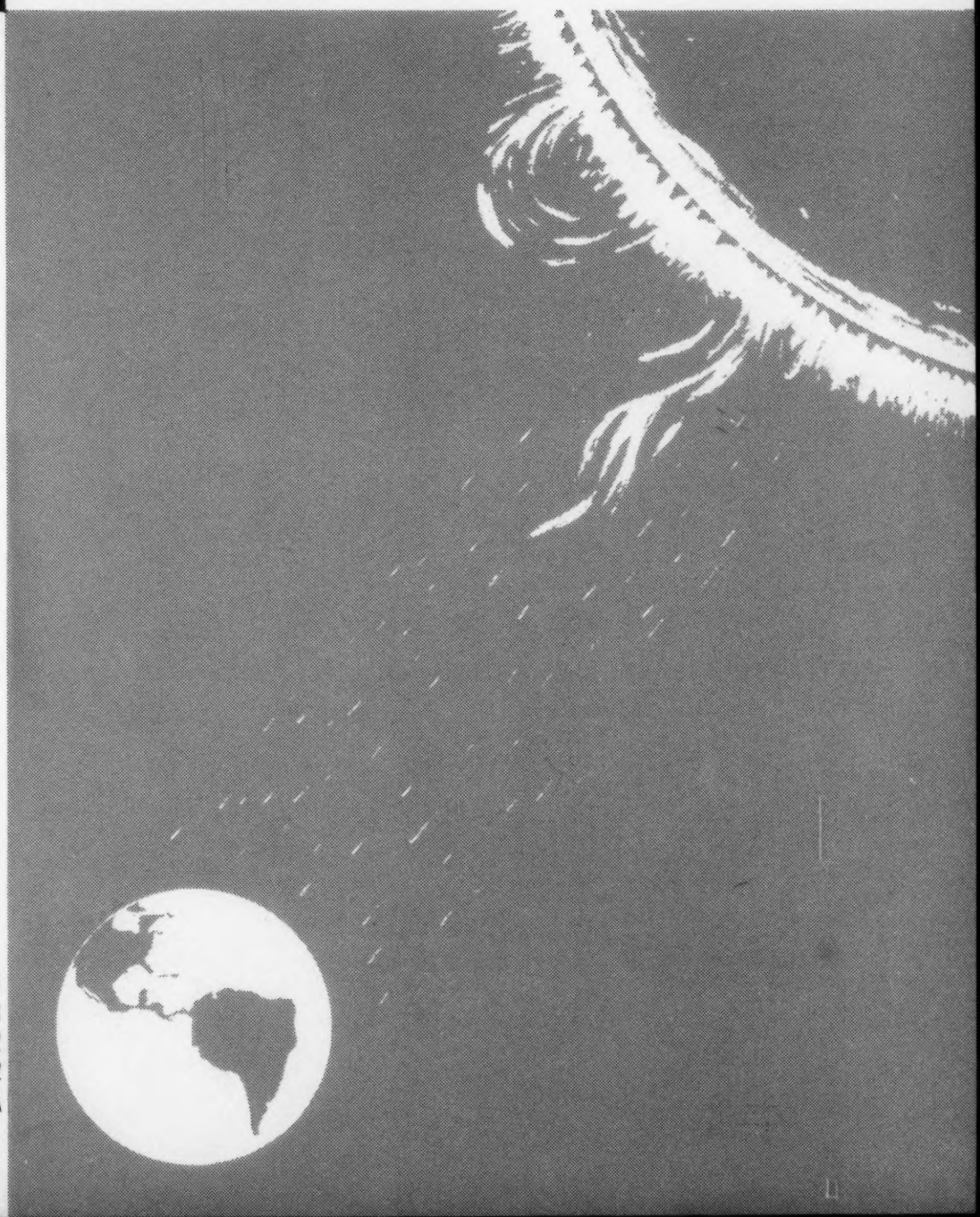

APRIL 1973

NUMBER 344-PART II
DATA FOR
OCTOBER 1972
SEPTEMBER 1972
& MISCELLANEA

U.S. DEPARTMENT OF COMMERCE
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Solar - Geophysical Data

NO. 344 APRIL 1973

Part II (Comprehensive Reports)

DATA FOR
OCTOBER 1972
SEPTEMBER 1972
& MISCELLANEA

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
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* * * * *

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*CRPL-FB 135 through 269
TER-FB 270 through 298
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SOLAR - GEOPHYSICAL DATA

No. 344

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director
Solar - Terrestrial Data Services Division

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For explanations of the data contained herein see "Descriptive Text" published as supplement to February 1973 "Solar-Geophysical Data" (Number 342).

SOLAR FLARES
Confirmed

OCTOBER 1972

OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. HER. DIST.	CENTRAL DISTANCE	NOMATH PLAGE REGION	CMP DAY					TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
	01	0134	0213	NO FLARE PATROL															
347 KODA	01	0227E	0251	0229	S07	W72	.957	12044	25.7	24D	-N		V	0229	1.05	1.10	2.00		1
GRP46348	01	0326	0349	0340	N12	E25	.426	12056	3.0	23	--F				.88				3 3 3 4
SIDE	01	0326	0347		N11	E25	.424	12056	3.0	21	1F		S	0336	2.03	2.30			DT
TEHR	01	0335E	0348	0335U	N11	E24	.408	12056	2.9	13D	-N				.19				DE
MANI	01	0345E	0351	0345	N13	E25	.429	12056	3.0	6D	-F	2		0345	.41	.46			
GRP46350	01	0433	0456	0443	N11	E25	.424	12056	3.1	23	-B				2.07				4 4 4 6
SIDE	01	0433	0458		N10	E25	.422	12056	3.1	25	1N		C	0445	4.17	4.75		975	FTZL
TEHR	01	0440E	0458	0442	N12	E23	.395	12056	2.9	18D	-B				1.65				FH
MANI	01	0444E	0458	0444	N12	E24	.411	12056	3.0	6D	-B	2		0444	1.44	1.58			
MITK	01	0447E	0456D		N10	E26	.437	12056	3.1	9D	-N		P	0450	1.03	1.10			D
GRP46351	01	0537	0546	0540	N12	E24	.411	12056	3.0	9	--N				.46				3 3 3 6
SIDE	01	0534	0545	0540	N12	E24	.411	12056	3.0	11	-F		C	0540	.86	1.00		62	D
ATHN	01	0538E	0545D	0540	N12	E25	.426	12056	3.1	7D	-N	1		0540	.34	.33			
TEHR	01	0540	0548	0541	N12	E23	.395	12056	3.0	8	-N				.19				F
GRP46352	01	0554	0609	0557	N09	E28	.341	12056	2.7	15	--F				.65				3 3 3 6
TEHR	01	0553	0609	0554	N10	E21	.359	12056	2.8	16	-F				.33				F
SIDE	01	0554	0608D	0559	N08	E28	.348	12056	2.7	14D	-F		C	0559	1.71	1.85		61	E
ATHN	01	0557E	0609	0558	N10	E20	.343	12056	2.7	12D	-N	1		0558	.52	.50			
GRP46354	01	1010	1035	1012	N12	E21	.364	12056	3.0	25	--N				.59				3 2 2 6
ATHN	01	1018E	1027	1013	N12	E22	.388	12056	3.1	17D	-N	1		1013	.52	.50			
BOUL	01	1010	1031	1010	N12	E21	.364	12056	3.0	21	-N	2	C	1010	.65	.69			
WEND	01	1020E	1046		N13	E20	.353	12056	2.9	26D	1F		V		3.09				
GRP46355	01	1055	1113	1102	S07	W71	.952	12044	26.1	18	-N				.77				2 2 2 4
ATHN	01	1037	1050	1040	S06	W70	.946	12044	26.2	21	-N	1		1040	.85	1.57			
CANR	01	1050	1110	1102	S06	W70	.946	12044	26.2	20	1N	3	V	1102	1.20	3.00			
ATHN	01	1059	1115	1102	S09	W72	.959	12044	26.1	16	-N	1		1102	.34	.64			
GRP46357	01	1239	1305	1252	N12	E21	.364	12056	3.1	26	--F				.85				4 4 4 6
HUAN	01	1232	1305	1251U	N12	E20	.349	12056	3.0	33	-N	2	C	1251	.41	.44			K
CANR	01	1245	1308D	1254	N13	E22	.383	12056	3.2	15D	-F	1	V		1.20	1.20			
ATHN	01	1246E	1304	1247	N11	E20	.345	12056	3.0	18D	-F	1		1247	.34	.33			
CATA	01	1255E	1308D	1255	N12	E20	.349	12056	3.0	5D	-N	2		1255	1.44	1.54		(182)	
358 HUAN	01	1329	1342	1334	N12	E20	.349	12056	3.1	13	--F	2	C	1334	.46	.50			E 4
359 HUAN	01	1417	1425	1419	N12	E20	.349	12056	3.1	8	--F	2	C	1419	.41	.44			E 3
GRP46360	01	1428	1458	1436	N13	E18	.322	12056	3.0	30	-F				1.78				2 2 2 3
WEND	01	1426E	1508D		N13	E17	.307	12056	2.9	42D	1N		P		3.09				
HUAN	01	1429	1447	1436	N13	E18	.322	12056	3.0	18	-F	1	C	1436	.31	.33			
GRP46361	01	1646	1711	1651	N12	E16	.286	12056	2.9	25	-N				1.39				2 2 1 3
BOUL	01	1645	1711	1651	N13	E14	.261	12056	2.7	26	1N	3	V	1651		2.40			
HUAN	01	1646	1710	1651	N12	E16	.286	12056	2.9	24	-N	1	C	1651	1.39	1.47			E
BOUL	01	1658E	1713	1702	N11	E17	.298	12056	3.0	15D	-N	2	C	1702	1.08	1.08			
362 PALE	01	2035	2111	2042	N12	E14	.255	12056	2.9	36	1B	2	V		2.27				Z F 1
	01	2125	2159	NO FLARE PATROL															
363 PALE	01	2203	2233	2208	N12	E13	.240	12056	2.9	30	1B	2	V		2.48				ZOE 1
	01	2356	0003	NO FLARE PATROL															
GRP46369	02	1448	1509	1458	N11	E01	.077	12056	2.7	21	-N				1.37				5 5 5 8
HUAN	02	1445	1458D		N11	E03	.091	12056	2.8	5D	-F	1	P	1449	.41	.41			E
MCMA	02	1445	1501	1448	N11	E02	.083	12056	2.8	16	-N		C	1448	.52	.50			E
BOUL	02	1449	1508	1452	N12	W03	.186	12056	2.4	16	-F	3	V	1452	.58	.60			
WEND	02	1451	1514		N12	E04	.115	12056	2.9	23	1N		P		4.13				
CAPS	02	1452E	1515D		N11	E01	.077	12056	2.7	23D	-N	2	V	1453	1.20	1.20		(164)	
	02	1911	1922	NO FLARE PATROL															
370 MCMA	02	1922E	1935		N11	W01	.077	12056	2.7	13D	--F		C	1923	.31	.38			E 1
371 MCMA	02	2114	2125	2116	N11	W02	.083	12056	2.7	11	--N		C	2116	.41	.48			E 1
	02	2129	2135	NO FLARE PATROL															
	02	2209	2217	NO FLARE PATROL															

Note: Catania and Capri-S express Maximum Intensities in percent of the local undisturbed chromosphere instead of percent of the local continuum. Parentheses are used to indicate this difference.

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OBSERVATORY	OBSERVED UT				LOCATION						DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY						TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH HB	MAX. INT. %	
GRP46373	03	0241	0315	0246	N11	W04	.103	12056	2.8		34	-N				2.37				4 3 3 4
CULG	03	0248	0345	0245	N11	W04	.103	12056	2.8		65	1B		C	0245	4.64	4.88			
CRON	03	0241E	0250	0244	N11	W02	.084	12056	3.0		9D	-F	3	V	0244	.68				
MANI	03	0241	0309	0248	N10	W05	.104	12056	2.7		28	-B	1		0248	1.86	1.87			
TEHR	03	0300E	0310	0300U	N10	W05	.104	12056	2.8		10D	-N				.65				F
GRP46376	03	0747	0807	0753	N10	W03	.078	12056	3.1		20	--N				.97				6 6 5 9
CANR	03	0745	0812	0750	N10	W04	.091	12056	3.0		27	-N	2	V		.88				
MANI	03	0747	0808	0751	N09	W05	.096	12056	2.9		21	-N	2		0751	.41	.42			
ISTA	03	0747	0800		N09	W04	.080	12056	3.0		13	-F								E
MEND	03	0748	0810		N12	W04	.116	12056	3.0		22	1N		P		3.89				
TEHR	03	0750E	0802	0750U	N10	W01	.061	12056	3.3		12D	-N				.19				DE
ATHN	03	0800E	0807	0800	N10	W02	.068	12056	3.2		7D	-F	1		0800	.34	.33			
GRP46379	03	1145	1158	1149	N13	W08	.176	12056	2.9		13	-F				1.00				2 2 2 6
CATA	03	1145	1155	1145	N12	W08	.166	12056	2.9		18	-N	3		1145	1.16	1.17		(1510)	
ATHN	03	1151E	1201	1153	N13	W08	.176	12056	2.9		10D	-F	1		1153	.83	.88			
GRP46380	03	1442	1458	1443	N11	W09	.172	12056	2.9		8	--F				.47				2 2 2 8
MCMA	03	1441	1451	1442	N11	W10	.187	12056	2.9		10	-N		C	1442	.41	.48			E
MEUD	03	1442	1448	1443	N10	W08	.150	12056	3.0		6	-F		C	1443	.52	.58			E
GRP46381	03	1455	1512	1458	N10	W08	.150	12056	3.0		17	-N				1.53				7 7 7 10
MCMA	03	1455	1512	1458	N10	W07	.134	12056	3.1		17	-B		C	1458	.52	.58			EHV
CAPE	03	1455E	1505D		N11	W06	.128	12056	3.2		10D	-N		P	1457	1.65	1.68			
BOUL	03	1455	1509U	1458	N09	W08	.144	12056	3.0		14D	-F	2	C	1458	1.29	1.30			
CANR	03	1455	1510	1457	N11	W08	.157	12056	3.0		15	-N	2	V	1457	1.60	1.60			
MEND	03	1455E	1515D		N11	W08	.157	12056	3.0		20D	1B		P		4.13				
MEUD	03	1457	1512	1458	N08	W08	.140	12056	3.0		15	-N		C	1458	1.03	1.08			H
CAPS	03	1508E	1511D		N12	W10	.195	12056	2.9		11D	-N	2	V	1506	.58	.58		(198)	C
GRP46383	04	0142	0153	0145	S07	E42	.695	12059	7.2		11	-N				.97				4 4 4 5
VORO	04	0148	0155D	0144	S06	E43	.704	12059	7.3		15D	1N		C	0144	1.57	2.17		69	EJ
MANI	04	0142	0200	0146	S06	E42	.692	12059	7.2		18	-F	2		0146	.52	.72			
CRON	04	0143	0147	0144	S09	E43	.714	12059	7.3		4	-F	3	V	0144	.58				
KODA	04	0145E	0148D		S08	E40	.675	12059	7.1		3D	-B		P	0145	1.38	1.38			D
	04	1622	1723	NO FLARE PATROL																
	04	1735	1748	NO FLARE PATROL																
	04	1803	2205	NO FLARE PATROL																
388 MANI	04	2322	2339	2325	S10	W68	.883	12049	30.5		17	--N	2		2325	.62	1.16			2
	05	2051	2105	NO FLARE PATROL																
	05	2153	2222	NO FLARE PATROL																
	05	2233	2240	NO FLARE PATROL																
	06	0809	0823	NO FLARE PATROL																
	06	0825	0827	NO FLARE PATROL																
	06	0832	0842	NO FLARE PATROL																
395 ATHN	06	1425	1433	1428	S09	W80	.988	12049	30.6		8	--F	3	C		.33				DE 4
396 PALE	06	1839E	1858	1844U	N04	W01	.046	12073	6.7		19D	--N	2	V		.93				F 2
	06	2022	2048	NO FLARE PATROL																
	06	2108	2125	NO FLARE PATROL																
	06	2127	2128	NO FLARE PATROL																
	06	2140	2142	NO FLARE PATROL																
	07	2127	2129	NO FLARE PATROL																
GRP46398	07	2219	0000	2236	N20	W25	.467	12057	6.1		10I	1F				5.45				3 2 2 4
VORO	07	2213	0000	2234	N19	W24	.447	12057	6.1		10I	2F		C	2234	7.39	7.98		69	EJL
CULG	07	2225	2337D	2238	N20	W25	.467	12057	6.1		72D	1N		P	2238	3.51	3.88			
MANI	07	2302E	2321	2302	N19	W26	.473	12057	6.0		19D	-N	2		2302	1.55	1.77			

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MONATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH HG	MAX. INT. %	
GRP46408	08	0738	0818	0739	S15	W70	.954	12062	3.1	40	1N				.69				3 3 2 9
ABST	08	0738E	0845D	0739	S17	W70	.956	12062	3.1	67D	1N		P	0739	.98				BD
CAPS	08	0738E	0749D		S12	W68	.948	12062	3.2	11D	-N	1	V	0739	.48				
ONDR	08	0743E	0750		S15	W71	.959	12062	3.0	7D	1N		V	0743			3.00		CD
	08	2029	2035	NO FLARE PATROL															
	08	2103	2120	NO FLARE PATROL															
GRP46414	10	1455	1504	1457	N20	W70	.934	12057	5.4	9	--F				.39				2 2 2 4
ATHN	10	1453	1503	1456	N20	W70	.934	12057	5.4	10	-N	2	C		.50				DE
RAHY	10	1456	1505	1457	N20	W70	.934	12057	5.4	9	-F	3	C		.28				DE H
GRP46415	10	1803	1832	1811	N08	E49	.750	12072	14.4	29	--F				.87				2 2 2 2
BOUL	10	1759	1830	1806	N08	E49	.750	12072	14.4	31	-F	2	V	1808	1.80	1.90			
RAHY	10	1806	1833	1813	N08	E48	.739	12072	14.4	27	-N	3	C		.74				DE
GRP46416	10	2003	2018	2007	N08	E67	.917	12074	15.9	15	--F				.34				3 3 3 3
RAHY	10	2001	2017	2008U	N08	E66	.910	12074	15.8	16	-F	2	C		.48				DE
HUAN	10	2002	2013	2006	N08	E68	.923	12074	15.9	11	-F	1	C	2006	.15				D
BOUL	10	2006	2023	2008	N08	E68	.923	12074	15.9	17	-F	3	V	2008	.40	1.08			
417 BOUL	10	2051	2104	2053	N07	E47	.727	12072	14.4	13	--F	2	V	2053	.80	1.10			2
GRP46418	12	0011	0046	0033	N07	E44	.691	12072	14.3	35	-F				1.88				2 2 2 4
MANI	12	0011	0104	0037	N08	E43	.678	12072	14.2	53	-F			0037	.62	.85			
MANI	11	0011	0104	0013	N08	E43	.678	12072	14.2	53	-F	2		0013	.41	.56			
VORO	11	0023E	0047D		N07	E44	.691	12072	14.3	24D	1F		P	0024	3.24	4.45		60	EJL
MANI	12	0029E	0045	0033	N05	E46	.717	12072	14.5	16D	-F	2		0033	.52	.75			
GRP46423	12	0506	0538	0524	S07	W57	.852	12059	6.9	24	--F				.59				2 2 2 4
MANI	12	0506	0532	0525	S07	W58	.860	12059	6.9	26	-F	2		0525	.92	.94			
TEHR	11	0517E	0527	0522	S07	W56	.842	12059	7.0	10D	-F	3	V		.66				DE
GRP46425	12	0845	0922	0850	S07	W59	.869	12059	6.9	37	-N				.57				3 3 2 5
MANI	12	0845E	0905	0847	S05	W60	.874	12059	6.9	20D	-N	2		0847	.31	.57			
ISTA	12	0845E	0918		S07	W57	.852	12059	7.1	25D	-N								D
TEHR	12	0846	0952	0853	S08	W60	.879	12059	6.9	66	-N	3	V		.83				DE H
GRP46427	12	1045	1109	1049	S08	W59	.871	12059	7.0	24	--F				.92				3 2 2 9
TEHR	12	1044E	1103	1049	S08	W60	.879	12059	6.9	19D	-N	3	V		.99				DE
UPIC	12	1045	1114	1048	S08	W58	.862	12059	7.1	29	-F		P	1048	.85	.81			
CATA	11	1105E	1110D	1105	S03	W60	.871	12059	7.0	5D	-N	3		1105	.29	.59		(182)	
	12	1725	2218	NO FLARE PATROL															
GRP46433	11	2218	2248	2227	S06	W68	.933	12059	6.8	22	-N				.78				2 2 2 3
PALE	12	2218E	2239D	2228U	S05	W67	.926	12059	6.9	21D	-N	2	V		.77				DE
MANI	11	2223E	2248	2225	S07	W68	.934	12059	6.8	17D	-N	2		2225	.62	1.28			
435 MITK	12	2359E	0036D		S07	W68	.934	12059	6.9	37D	1N		C	2359	1.34				E 5
GRP46439	12	1013	1021	1015	N11	W79	.978	12073	8.5	8	--F				.17				1 1 1 2
ATHN	12	1013	1021	1015	N10	W78	.975	12073	8.6	8	-F	2	C		.17				DE
ATHN	12	1014E	1021	1015	N13	W80	.981	12073	8.4	7D	-F	3	V		.17				DE
	12	1955	2011	NO FLARE PATROL															
	12	2025	2044	NO FLARE PATROL															
	12	2045	2108	NO FLARE PATROL															
	12	2209	2222	NO FLARE PATROL															
	12	2226	2234	NO FLARE PATROL															
GRP46443	13	0356	0418	0401	N07	E17	.291	12072	14.4	22	1N				3.95				4 4 4 5
MITK	13	0355	0421	0358	N10	E15	.265	12072	14.3	26	1N		C	0358	2.86	2.28			EG
SIDE	13	0356	0413		N04	E21	.359	12072	14.7	17	2F		P	0401	10.57	11.48		61	EGL
MANI	13	0358E	0419	0401	N07	E16	.274	12072	14.4	21D	-N	2		0401	1.08	1.93			
TEHR	13	0403E	0417	0405	N05	E15	.258	12072	14.3	14D	-N	3	V		1.32				F
446 NEUD	13	1524	1535	1528	N13	E33	.548	12074	16.1	11	--F		C	1528	.41	.50			4

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH HG	MAX. INT. %	
GRP46447	14	0305	0335	0310	N12	E26	.444	12074	16.1	30	1N				3.49				5 5 5 6
SIDE	14	0303	0338D		N08	E27	.452	12074	16.2	27D	2F		S	0314	9.71	11.30		58	EGTU
CULG	14	0305	0415	0312	N12	E26	.444	12074	16.1	70	1N		C	0312	2.89	3.10			
MITK	14	0305	0348	0308	N11	E26	.441	12074	16.1	43	-N		C	0308	1.44	1.60			E
MANI	14	0305	0330	0310	N13	E26	.447	12074	16.1	25	-N	2		0310	1.75	1.94			
TEHR	14	0309E	0332	0309U	N15	E24	.426	12074	15.9	23D	-N	3	V		1.65				F
	14	1824	1828	NO FLARE PATROL															
	14	1829	1842	NO FLARE PATROL															
	14	1848	1918	NO FLARE PATROL															
	14	1945	2027	NO FLARE PATROL															
	14	2127	2207	NO FLARE PATROL															
GRP46454	15	1017	1030	1021	S13	E87	1.000	12086	22.0	13	1N				.62				3 3 3 6
TEHR	15	1015E	1031	1017	S10	E90	1.000	12086	22.2	16D	-B	4	V		.33				DE
CANR	15	1018	1025	1022	S11	E81	.991	12086	21.9	7	1N	2	C	1022	.65				
CATA	15	1025E	1035D	1025	S10	E90	1.001	12086	22.2	10D	1F	2		1025	.87			(145)	
GRP46456	15	1000	1031	1015	N19	W67	.916	12080	10.7	31	--F				.26				2 2 1 4
MCMA	15	1000	1031		N18	W67	.916	12080	10.7	31	-N		C	1015	.26	.78			D
BOUL	15	1012E	1038D	1015	N20	W67	.916	12080	10.7	18D	-F	2	V						
457 RAMY	15	1051E	1910	1052U	N19	W66	.989	12080	10.8	19D	-N	2	C		.74				DE 3
459 HUAN	15	1954	2005		N18	W68	.922	12080	10.7	11	--F	1	C	1958					ET 3
460 BOUL	15	2218E	2238D	2219	N20	W68	.923	12080	10.8	12D	--F	2	V						3
GRP46463	16	0832	0844	0836	S06	E65	.913	12079	21.2	12	--F				.44				3 3 3 8
ARCE	16	0838E	0840D		S05	E64	.905	12079	21.2	10D	-F		C	0835	.25	.68			
TEHR	16	0831	0844	0835	S07	E67	.928	12079	21.4	13	-N	4	V		.17				DE
ABST	16	0834	0843	0836	S05	E65	.912	12079	21.2	9	-F		C	0836	.98			78	D
GRP46469	16	1915	1929	1921	N19	W82	.986	12080	10.7	13	--F				.62				2 2 1 3
MCMA	16	1916E	1929D		N18	W82	.987	12080	10.7	13D	-F		P	1916					D
PALE	16	1928E	1929	1921	N20	W82	.986	12080	10.7	9D	-N	2	V		.62				F
470 PALE	16	2028E	2042	2029	S05	E58	.856	12079	21.2	14D	--N	2	V		.31				2
471 VORO	16	2230	2238	2232	S05	E58	.856	12079	21.3	8	-B		C	2232	.74	1.38		73	D 3
	17	1608	1617	NO FLARE PATROL															
	17	1629	1637	NO FLARE PATROL															
	17	2206	2308	NO FLARE PATROL															
476 VORO	17	2352	0002	2355	S06	E45	.734	12079	21.4	10	-B		C	2355	.84	1.16		61	DJ 3
477 VORO	18	0012	0022	0012	S06	E45	.724	12079	21.4	10	--B		C	0012	.65	.91		63	DJ 3
478 MANI	18	0211	0228	0212	S07	E70	.945	12086	23.3	9	--F	2		0212	.31	.34			2
487 HUAN	18	1434	1442	1440U	S18	E88	1.000	12089	25.2	8	--F	1	C	1440	.15				D 3
GRP46488	18	1524	1533	1527	S16	E44	.750	12086	21.9	9	--F				.46				2 2 1 2
RAMY	18	1522	1537	1526	S13	E42	.716	12086	21.8	15	-F	2	C		.48				DE H
HUAN	18	1526	1528	1527	S18	E46	.779	12086	22.1	2	-F	1	C	1527					
489 HUAN	18	1638	1648D		S18	E46	.779	12086	22.1	20	--F	1	P	1639	.21	.32			D 2
490 RAMY	18	1833	1857	1837	S18	E79	.989	12089	24.7	24	--F	2	C						DE 2
491 PALE	18	1931E	1938	1934	S15	E39	.692	12086	21.7	7D	--N	3	V		.41				1
	18	1952	2015	NO FLARE PATROL															
	18	2056	2104	NO FLARE PATROL															
	18	2117	2121	NO FLARE PATROL															
	18	2124	2138	NO FLARE PATROL															
	18	2146	2207	NO FLARE PATROL															

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY			CONF.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hg	MAX. INT. %	
GRP46492	19	0613	0634	0621	S16	E40	.719	12086	22.3	21	-N				.74				3 3 3 4
CROM	19	0613	0628		S18	E40	.719	12086	22.3	15	-F	3	V		.80				
CATA	19	0628E	0645	0628	S19	E38	.784	12086	22.1	25D	-N	2		0620	.58	.81		(166)	
TEHR	19	0622E	0638	0622U	S17	E41	.724	12086	22.3	8D	-N	4	V		.83				F
GRP46493	19	0740	0808	0744	S06	E27	.490	12079	21.3	28	--N				.82				3 3 3 5
MONT	19	0740	0746	0743	S07	E28	.510	12079	21.4	6	-N		C	0743	1.13				
CAPS	19	0744E	0747D		S05	E28	.498	12079	21.4	3D	-F	2	V	0747	1.80	1.20		(152)	
TEHR	19	0744E	0759	0744U	S07	E26	.482	12079	21.3	15D	-N	4	V		.33				F
MONT	19	0750	0800	0753	S07	E28	.510	12079	21.4	10	-N		C	0753	.72				
GRP46494	19	0923	0927	0923	S07	E27	.496	12079	21.4	4	--N				.52				2 1 1 8
MONT	19	0923	0927	0923	S07	E27	.496	12079	21.4	4	-N		C	0923	.52				
ARCE	19	0925E	0935D		S05	E27	.484	12079	21.4	10D	-F		C	0935	.20	.30			
GRP46495	19	0925	0940	0927	S03	E55	.825	12085	23.5	15	--F				.35				2 2 2 8
MONT	19	0925	0940	0927	S03	E56	.835	12085	23.6	15	-N		C	0927	.41				
ARCE	19	0930E	0940D		S02	E53	.804	12085	23.4	10D	-F		C	0930	.28	.50			
GRP46496	19	1101	1133	1105	S07	E25	.469	12079	21.3	32	-N				1.00				3 3 3 7
MONT	19	1101	1135D	1107	S07	E26	.482	12079	21.4	34D	-N		C	1107	1.66				H
RAMY	19	1102E	1131	1102U	S07	E26	.482	12079	21.4	29D	-F	3	V		.84				DE
CATA	19	1105E	1110D	1105	S08	E24	.462	12079	21.3	5D	-N	3		1105	.29	.32		(170)	
GRP46508	19	1229	1239	1232	S07	E25	.469	12079	21.4	10	--F				.48				4 4 4 9
ARCE	19	1228E	1240D		S05	E25	.456	12079	21.4	12D	-F		C	1235	.51	.60			
HEUO	19	1230	1240	1234	S07	E25	.469	12079	21.4	10	-F		C	1234	.41	.40			H
CATA	19	1230	1235	1230	S08	E24	.462	12079	21.3	5	-N	2		1230	.58	.65		(182)	
HUAN	19	1236E	1239		S07	E26	.482	12079	21.5	3D	-F	1	P	1237	.41	.47			E
GRP46501	19	1331	1335	1332	S07	E25	.469	12079	21.4	4	--F				.47				3 2 2 8
HEUO	19	1331	1335	1332	S07	E25	.469	12079	21.4	4	-F		C	1332	.31	.30			
MCMA	19	1331	1538D		S07	E25	.469	12079	21.4	119D	-N		C	1332	.62	.60			EJK
CAPS	19	1510E	1527D		S06	E29	.462	12079	21.5	9D	-N	3	V	1521	1.20	1.40		(182)	
GRP46506	19	1652	1728	1655	S07	E24	.455	12079	21.5	36	--N				.73				2 2 2 4
RAMY	19	1651	1725	1655	S07	E24	.455	12079	21.5	34	-N	2	C		.93				DE
MCMA	19	1652	1738D	1655	S07	E23	.441	12079	21.4	38D	-N		C	1655	.52	.60			E
GRP46507	19	1905	1930	1905	S07	E22	.427	12079	21.4	25	--N				.60				3 3 3 4
MCMA	19	1905E	1938D		S07	E22	.427	12079	21.4	25D	-N		C	1912	.52	.60			E
RAMY	19	1905E	1928	1905U	S07	E23	.441	12079	21.5	23D	-N	2	V		.65				F
HUAN	19	1905	1933D		S07	E22	.427	12079	21.4	28D	-B	1	C	1907	.62	.68			E
	19	2016	2022	NO FLARE PATROL															
588 HUAN	19	2022E	2026		S17	E66	.933	12089	24.8	4D	--N	1	P	2022	.31				CD 2
589 HUAN	19	2039	2046	2045U	S17	E66	.933	12089	24.8	7	--F	1	C	2045	.26				D 2
	20	0304	0312	NO FLARE PATROL															
GRP46513	20	0721	0745	0726	S11	E23	.473	12086	22.0	24	--N				.61				5 5 5 7
CROM	20	0721E	0725D		S12	E23	.482	12086	22.0	4D	-N	2	V		.88				
MANI	20	0723E	0732	0723	S12	E23	.482	12086	22.0	9D	-N	2		0723	.72	.82			
BUCA	20	0725E	0758D		S11	E23	.473	12086	22.0	25D	-F		C	0725	.55	.60			
TEHR	20	0728E	0747	0728U	S11	E23	.473	12086	22.0	19D	-N	4	V		.66				F
CAPS	20	0729E	0758D		S10	E22	.452	12086	22.0	21D	-N	1	S	0729	.30	.30			
515 HUAN	20	1553	1557	1555	S12	E10	.423	12086	22.0	4	--F	1	C	1555	.15	.17			D 3
GRP46516	20	1748	1848	1809	S10	E18	.482	12086	22.1	60	--F				.59				2 2 2 3
RAMY	20	1748	1825	1809	S10	E18	.482	12086	22.1	40	-F	2	C		.65				F
MCMA	20	1751	1918	1809	S09	E17	.388	12086	22.0	79	-N		C	1809	.52	.60			E
GRP46517	20	1749	1807	1755	S17	E52	.830	12089	24.6	18	-N				.60				3 3 3 4
MCMA	20	1749	1808	1754	S18	E53	.842	12089	24.7	19	-N		C	1754	.77	1.30			EL
PALE	20	1751E	1805	1756	S16	E50	.806	12089	24.5	14D	-N	2	V		.83				U
HUAN	20	1802E	1807		S17	E53	.839	12089	24.7	5D	-F	1	P	1803	.21	.37			E
GRP46518	20	1753	1823	1804	S08	E18	.382	12085	22.1	38	--N				.46				2 2 2 4
PALE	20	1753	1811	1804	S08	E18	.382	12085	22.1	18	-N	2	V		.46				
HUAN	20	1802E	1834D		S08	E18	.382	12085	22.1	32D	-N	1	C	1811	.46	.58			E
	20	1953	2022	NO FLARE PATROL															
	21	0444	0508	NO FLARE PATROL															

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH HG	MAX. INT. %	
GRP46519	21	0805	0936	0933	S17	E88	1.000	12098	27.9	91	-F				1.88				3 2 1 7
ISTA	21	0805	0935		S17	E90	1.000	12098	28.1	90	-N								AD
ARCE	21	0818E	1000D		S14	E85	.998	12098	27.7	102D	-N		C	0818	.28				K
ABST	21	0931E	0936D	0933	S16	E85	.998	12098	27.8	5D	1F		P	0933	1.88				AD
523 CAPS	21	1537	1556D		S12	E90	1.000	12098	28.4	19D	1B	2	P						4
	21	1634	1636	NO FLARE PATROL															
GRP46524	21	1839	1856	1848	S13	E85	.327	12086	22.2	17	--F				.44				2 2 2 2
HUAN	21	1839	1854		S12	E84	.307	12086	22.1	15	-F	1	C	1844	.26	.27			D
PALE	21	1839E	1857	1848	S13	E86	.332	12086	22.2	18D	-N	2	V		.62				
525 PALE	21	2054E	2124	2056	S15	E88	.373	12086	22.5	30D	--N	2	V		.93				F 1
GRP46526	22	1031	1051	1034	S06	W16	.335	12079	21.2	20	--F				.95				2 2 2 4
ATHN	22	1031E	1051	1032	S05	W15	.312	12079	21.3	20D	-F	3	V		1.32				DE
CATA	22	1035E	1048D	1035	S07	W16	.345	12079	21.2	5D	-N	1		1035	.58	.61		(151)	
527 RAHY	22	1631	1639	1633	S07	E06	.237	12085	23.1	8	--F	3	C		.28				DE 2
528 RAHY	22	1653E	1658	1653U	N18	E07	.997	12095	29.2	5D	--F	3	C		.19				DE 3
GRP46530	22	1914	1922	1915	S06	E05	.214	12085	23.2	8	--F				.37				2 2 2 2
RAHY	22	1914	1921	1915	S07	E05	.238	12085	23.2	7	-F	3	C		.37				DE
PALE	22	1915E	1922D	1915U	S04	E04	.176	12085	23.1	7D	-N	2	V		.36				F
	22	2150	2213	NO FLARE PATROL															
GRP46532	22	2251	2304	2254	S15	E21	.486	12089	24.5	13	--N				.59				2 2 2 3
VORO	22	2251	2304	2253	S15	E20	.476	12089	24.5	13	-B		C	2253	.65	.72		74	DH
PALE	22	2253E	2302D	2255	S15	E22	.497	12089	24.6	9D	-F	3	V		.52				
GRP46534	23	0246	0256	0249	S12	W08	.326	12086	22.5	10	--N				.83				2 2 2 5
MANI	23	0245E	0255	0248	S12	W08	.326	12086	22.5	10D	-N	2		0248	1.83	1.88			
PALE	23	0246	0257	0249	S12	W07	.319	12086	22.6	11	-N	3	V		.62				F
GRP46538	23	0724	0758	0731	S13	W18	.355	12086	22.6	26	-N				1.49				2 2 2 5
ABST	23	0724	0758	0731	S14	W11	.377	12086	22.5	34	1N		C	0731	2.87	2.20			E
CRON	23	0725E	0741		S12	W08	.326	12086	22.7	16D	-N	2	V	0725	.98				
GRP46539	23	0921	0951	0925	S17	W14	.442	12086	22.3	30	--F				1.16				5 5 4 6
CATA	23	0926E	0935D	0925	S20	W12	.467	12086	22.5	15D	-N	2		0925	1.73	1.96		(151)	
ISTA	23	0920	1000		S16	W08	.386	12086	22.8	40	-F								E
TEHR	23	0922	0945	0927	S17	W16	.459	12086	22.2	23	-F	3	V		1.49				F
ATHN	23	0922E	0945	0922U	S13	W20	.454	12086	21.9	23D	-F	3	V		.58				DE
ARCE	23	0928E	0955D		S20	W12	.467	12086	22.5	27D	-N		C	0935	.92	1.80			U
GRP46540	23	0943	0951	0945	S11	E90	1.000	12094	30.2	8	--B				.15				2 2 1 4
ATHN	23	0943E	0951	0945	S12	E90	1.000	12094	30.2	8D	-N	3	V						DE
ARCE	23	0945E	0945D		S09	E90	1.000	12094	30.2		-B		C	0945	.15				
546 HUAN	23	1335	1340D		S09	E88	1.000	12094	30.2	5D	-N	1	P	1337	.41				4
548 ARCE	23	1345E	1400D		S14	E87	1.000	12094	30.1	15D	--F		C	1355	.12				3
	23	1414	1434	NO FLARE PATROL															
549 BOUL	23	1548	1558	1550	S07	W34	.569	12079	21.1	10	--F	3	V	1550	.28	.28			2
	23	1635	1653	NO FLARE PATROL															
550 MCMA	23	1848	1851D	1848	S13	W20	.454	12086	22.3	11D	--N		C	1848	.31	.38			D 2
551 MCMA	23	1847	1851D	1849	S13	E88	1.000	12094	30.4	4D	-N		C	1849					E 2
552 RAHY	23	1922	1939	1926	S08	E08	.987	12094	29.8	17	--F	3	C		.28				DE 3
GRP46553	23	1956	2010	2002	S18	E13	.447	12089	24.8	14	--N				.45				2 2 2 3
RAHY	23	1956	2010	2000	S19	E14	.468	12089	24.9	14	-N	3	C		.37				DE
PALE	23	2001E	2009D	2004U	S17	E12	.426	12089	24.7	8D	-N	3	V		.52				F H
554 VORO	23	2324	2341	2328	S18	E78	.982	12094	29.8	17	1N		C	2328	.84	4.88		74	DH 3
555 VORO	23	2345	2349	2346	S18	E79	.985	12094	29.9	4	1F		C	2346	.56	2.78		57	DH 4
GRP46556	24	0818	0826	0820	S11	E81	.991	12094	30.1	8	-N				.67				2 2 2 3
PALE	24	0817E	0826	0820	S12	E83	.995	12094	30.2	9D	-N	2	V		.41				F
VORO	24	0818	0826	0819	S10	E79	.985	12094	29.9	8	1N		C	0819	.93	4.47		71	D

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM-PORT-ANCE	OBS.			MEASUREMENTS					REMARKS				
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MOUNT WILSON PLAGE REGION	CMP DAY	MIN.		CONO.	TYPE		TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %					
	24	0284	0288	NO FLARE PATROL																				
559 CRON	24	0343	0353		S13	E76	.977	12094	29.9	10	--N	2	V			.40							2	
2 STATIONS REPORTING GROUP 46560. 0 STATIONS OBSERVING AND NOT REPORTING.																								
560 TACH	24	0524	0536	0526	S13	E85	.998	12094	30.6	12	1B		C		0526	.83		3.00	126		0		2	
560 CRON	24	0523	0531	0528	S19	E71	.961	12094	29.5	8	*-N	2	C		0528	.32							2	
GRP46562	24	0628	0658	0631	S13	E76	.977	12094	30.8	22	-N					.67					6	6	6	6
ABST	24	0626	0646	0630	S14	E79	.987	12094	30.2	20	1N		C		0630	.99			96		OZ			
TACH	24	0628	0636	0630	S13	E80	.989	12094	30.3	8	1N		C		0630	.83		5.30	84		D			
TEHR	24	0628	0658D	0632	S11	E83	.995	12094	30.5	22D	-N					.68					FH			
ATHN	24	0628E	0638	0630	S12	E73	.964	12094	29.7	10D	-N	3	V			.66					DE			
CRON	24	0629	0635	0631	S14	E70	.951	12094	29.5	6	-N	2	C		0631	.32								
CATA	24	0630	0635	0630	S12	E70	.949	12094	29.5	5	-B	2			0630	.58			(229)		TZ			
46562	24	0628	0708	0648	S11	E70	.983	12094	30.1	32	*-F					.42					2	2	2	6
TEHR	24	0628	0658D	0648	S11	E83	.995	12094	30.5	22D	-N					.50					FH			
ATHN	24	0648E	0708	0648U	S11	E72	.959	12094	29.7	12D	-F	3	V			.33					DE			
GRP46564	24	0828	0835	0823	S10	E88	.988	12094	30.3	15	-N					.46					4	4	4	5
ABST	24	0819	0829	0821	S12	E85	.998	12094	30.7	10	1F		C		0821	.81			94		AO			
CATA	24	0828	0835	0825	S08	E77	.978	12094	30.1	15	-N	2			0825	.29			(178)					
CAPS	24	0823E	0832D		S09	E77	.978	12094	30.1	9D	-B	2	V		0825	.38					C			
BUCA	24	0825E	0842D		S09	E79	.985	12094	30.3	17D	-F		C		0830	.43								
GRP46565	24	0908	0945	0915	S12	E71	.954	12094	29.7	45	-N					.87					2	2	1	4
ISTA	24	0908E	0938		S12	E72	.959	12094	29.8	30D	-N										BE			
CATA	24	0915E	1000	0915	S12	E69	.944	12094	29.6	45D	1N	2			0915	.87			(158)		TZ			
GRP46566	24	1018	1027	1015	S14	E72	.961	12094	29.8	17	-B					.87					2	2	1	2
CATA	24	1018	1038	1015	S14	E72	.961	12094	29.8	28	1B	3			1015	.87			(248)		TZ			
ISTA	24	1018	1024	1015	S13	E71	.955	12094	29.7	14	-N													
GRP46567	24	1051	1114	1112	S13	E75	.973	12094	30.1	23	-F					.25					3	2	1	6
MONT	24	1051	1100	1057	S13	E78	.980	12094	29.7	9	-N		C		1057	.72								
ISTA	24	1058	1114		S12	E70	.949	12094	29.7	16	-F										D			
TEHR	24	1111E	1114	1112	S14	E79	.987	12094	30.4	3D	-N					.25					DE			
GRP46568	24	1128	1136	1129	S10	E67	.938	12094	29.5	8	--F					.41					2	2	1	5
MONT	24	1126E	1138D	1129	S10	E67	.938	12094	29.5	4D	-N		C		1129	.41								
ISTA	24	1129	1136		S10	E67	.938	12094	29.5	7	-F										D			
GRP46569	24	1155	1209	1208	S13	E71	.955	12094	29.8	14	--N					.32					5	5	3	6
ISTA	24	1146	1204		S12	E69	.944	12094	29.7	18	-N													
RAHY	24	1157E	1211		S12	E75	.972	12094	30.1	14D	-N	2	V								DE			
CANR	24	1157	1157D		S12	E70	.949	12094	29.7		-B	1	V		1157	.40	.80							
CATA	24	1200	1215	1208	S14	E71	.956	12094	29.8	15	-B	3			1208	.29			(219)		T			
HUAN	24	1202E	1207		S14	E72	.961	12094	29.9	9D	-F	1	P		1203	.26					E			
570 RAHY	24	1238E	1258		S12	E70	.949	12094	29.8	12D	-N	3	V								DE		3	
571 CATA	24	1255	1305	1255	S13	E65	.921	12094	29.4	10	-N	3			1255	.50	1.40		(195)		T		3	
GRP46572	24	1343	1358	1345	S15	E72	.962	12094	30.8	15	-N					.57					4	4	4	5
LOCA	24	1340	1405	1345	S13	E67	.933	12094	29.6	25	1N		P		1345	.85	2.60							
HUAN	24	1343	1354	1344	S15	E74	.970	12094	30.1	11	-N	1	C		1344	.26					E			
CAPS	24	1344E	1348D		S16	E73	.967	12094	30.0	4D	-N	1	S		1345	.58					C			
CATA	24	1345	1359	1345	S15	E72	.962	12094	30.0	10	-B	3			1345	.50			(234)		E			
573 RAHY	24	1508	1528	1511	S13	W33	.688	12086	22.2	20	--F	2	C			.65					DE		1	
	24	1516	1528	NO FLARE PATROL																				
574 CAPS	24	1538E	1541D		S18	W22	.449	12085	23.8	3D	--F	1	S		1540	1.60	1.90		(168)		F		2	
575 BOUL	24	1545E	1608D	1545U	S13	W32	.596	12086	22.3	15D	--F	1	V										3	
GRP46576	24	1557	1611	(1558)	S14	E78	.951	12094	29.9	14	-N					.58					2	2	1	4
BOUL	24	1555E	1615D	1555U	S14	E78	.951	12094	29.9	28D	-N	1	V											
CANR	24	1558	1607		S14	E78	.951	12094	29.9	9	-N	2	V		1600	.50	1.20							
GRP46579	24	1806	1818	1808	S13	E67	.933	12094	29.8	12	--F										2	2	0	4
RAHY	24	1806E	1815		S13	E69	.945	12094	29.9	9D	-F	2	V								DE			
BOUL	24	1808E	1820	1808U	S13	E65	.921	12094	29.6	12D	-N	1	V											

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	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MONATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	
GRP46588	24	1908	1910	1903	S08	E31	.553	12090	27.1	10	--N				.58				3 3 3 3
RAMY	24	1908	1913	1902	S08	E31	.553	12090	27.1	13	-N	2	C		.74				DE
PALE	24	1908	1910	1904	S08	E30	.540	12090	27.0	10	-N	2	V		.62				
HUAN	24	1902U	1908	1904U	S08	E32	.567	12090	27.2	60	-F	1	C	1904	.15	.19			D
581 PALE	24	1919E	1922	1919U	S15	E65	.924	12094	29.7	3D	-N	2	V		.46				2
GRP46582	24	1957	2005	1959	S14	E65	.922	12094	29.7	8	--N				.34				3 3 2 3
PALE	24	1957E	2004	1959	S15	E63	.911	12094	29.6	7D	-B	2	V		.41				
RAMY	24	1957	2008	1959	S13	E60	.939	12094	29.9	11	-N	2	V						DE
HUAN	24	1957	2003	1958	S13	E63	.907	12094	29.6	6	-N	1	C	1958	.26				E
GRP46583	24	2003	2017	2004	S09	E30	.546	12090	27.1	14	--F				.56				2 2 1 4
RAMY	24	2002	2018	2004	S08	E30	.540	12090	27.1	16	-F	2	C		.56				DE
HUAN	24	2004	2014D		S09	E30	.546	12090	27.1	10D	-F	1	C	2007					
RAMY	24	2005E	2016	2006U	S08	E30	.540	12090	27.1	11D	-F	2	V		.52				DE
GRP46584	24	2012	2026	2017	S14	E65	.922	12094	29.7	14	-N				.52				3 3 1 3
RAMY	24	2012	2027	2015	S13	E69	.945	12094	30.8	15	-N	2	V						DE
HUAN	24	2012	2014D		S13	E63	.907	12094	29.6	2D	-F	1	P						
PALE	24	2014E	2024	2018	S15	E63	.911	12094	29.6	10D	-B	2	V		.52				F
585 PALE	24	2047E	2052	2048	S10	E65	.917	12094	29.7	5D	--F	2	V		.26				2
GRP46587	24	2116	2127	2123	S12	E65	.928	12094	29.8	11	--F				.29				2 2 2 4
HUAN	24	2114	2122	2120U	S09	E64	.909	12094	29.7	8	-F	1	C	2120	.15	.34			D
HUAN	24	2119	2126	2122	S12	E67	.932	12094	29.9	7	-F	1	C	2122	.26				
PALE	24	2121E	2128	2124	S14	E65	.922	12094	29.8	7D	-F	2	V		.31				
588 PALE	24	2221E	2232	2224	S15	E63	.911	12094	29.7	11D	--N	2	V		.41				F H 2
GRP46589	24	2244	2255	2246	S14	E63	.909	12094	29.7	11	-N				.70				3 3 3 4
CROM	24	2244	2245	2244	S14	E59	.879	12094	29.4	1	-N	2	C	2244	.43	.91			
MANI	24	2245E	2300	2245	S13	E65	.921	12094	29.8	15D	-N	1		2245	.83	1.68			
PALE	24	2248E	2301	2249	S14	E65	.922	12094	29.8	13D	-N	2	V		.83				F
GRP46590	25	0025	2629	1634	S13	W32	.596	12086	22.6	004	-F				.82				4 2 2 7
CULG	24	2315	0229	0044	S15	W38	.587	12086	22.7	194	1N		C	0044	2.68	3.38			
MANI	24	2322E	0017	2322	S13	W32	.596	12086	22.6	55D	-N	1		2322	.62	.77			
MITK	25	0000E	0116D		S14	W31	.590	12086	22.7	76D	1B		P	0002	2.86	2.60			
CROM	25	0028E	0038	0025	S13	W31	.584	12086	22.7	10D	-F	3	V	0025	.40				
MANI	25	0030E	0038	0032	S13	W33	.608	12086	22.5	8D	-N	1		0032	1.24	1.55			
GRP46591	24	2342	2347	2343	S14	E62	.902	12094	29.6	5	-N				.92				3 3 3 5
PALE	24	2341	2347	2343	S15	E63	.911	12094	29.7	6	-N	2	V		.93				H
VORO	24	2342	2344	2342	S12	E61	.891	12094	29.6	2	1N		C	2342	1.11	2.38		62	DH
MANI	24	2345E	2350	2345	S14	E62	.902	12094	29.6	5D	-N	1		2345	.72	1.48			
GRP46593	25	0005	0013	0007	S13	E65	.921	12094	29.9	8	-N				.62				2 2 2 5
VORO	25	0005	0013	0007	S11	E65	.918	12094	29.9	8	1N		C	0007	.93	2.17		60	DH
PALE	25	0005E	0012	0006	S14	E64	.916	12094	29.8	7D	-N	2	V		.31				
GRP46594	25	0031	0036	0033	S12	E64	.913	12094	29.8	5	--F				.68				3 3 3 7
CROM	25	0031E	0035		S13	E62	.900	12094	29.7	4D	-F	3	V	0035	.48				
MANI	25	0031	0038	0032	S13	E64	.914	12094	29.8	7	-N	1		0032	.62	1.24			
VORO	25	0032	0036	0033	S11	E65	.918	12094	29.9	4	1F		C	0033	1.02	2.39		58	DH
GRP46596	25	0139	0148	0144	S12	E62	.898	12094	29.7	9	--N				.51				4 4 4 5
MANI	25	0138E	0144	0144	S12	E62	.898	12094	29.7	14D	-N			0144	.41	.83			
VORO	25	0141	0152	0144	S10	E64	.910	12094	29.9	11	1N		C	0144	.93	2.18		60	D
PALE	25	0142	0148	0144	S13	E61	.893	12094	29.6	6	-N	2	V		.31				H
CROM	25	0143	0146	0144	S13	E61	.893	12094	29.6	3	-F	3	V	0146	.48				
GRP46599	25	0226	0239	0229	S12	E63	.906	12094	29.8	13	1N				1.11				5 5 4 7
MANI	25	0228E	0238	0228	S12	E62	.898	12094	29.7	10D	-N	2		0228	1.03	2.07			
MANI	25	0228E	0238	0228	S12	E62	.898	12094	29.7	10D	-N			0228	.31	.62			
MANI	25	0221	0224	0224	S10	E60	.880	12094	29.6	3	-N	2		0224	.83	1.55			
CROM	25	0226	0230	0228	S13	E64	.914	12094	29.9	4	-F	3	V	0230	.45				
KODA	25	0228	0254D	0229	S15	E63	.910	12094	29.8	26D	1B		V	0229	2.23	2.20	3.24		E
VORO	25	0228	0235	0229	S10	E65	.917	12094	30.0	7	2F		C	0229		5.28		57	D
MITK	25	0232E	0248		S13	E65	.921	12094	30.0	8D	-F		P	0233	.72				D
MITK	25	0248	0253	0249	S14	E61	.894	12094	29.7	5	-F		P	0249	.72	1.68			D
603 MITK	25	0338E	0356	0349	S09	E61	.886	12094	29.7	18D	-N		C	0349	.93	2.08			D 4
GRP46606	25	0501	0509	0502	S13	E61	.893	12094	29.8	8	-F				.71				3 2 2 4
CROM	25	0501E	0506	0501U	S14	E62	.902	12094	29.9	5D	-F	3	V	0506	.78				
MANI	25	0502E	0511	0502	S12	E60	.883	12094	29.7	9D	-N	2		0502	.72	1.36			
TACH	25	0502E	0536	0516	S11	E61	.889	12094	29.8	34D	1N		C	0516	1.88	2.18	3.81	89	EKL

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	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		CONF.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP46607	25	0624	0637	0629	S12	E61	.891	12094	29.8	13	1N		C		1.29				4 4 4 5
TACH	25	0623	0633	0626	S12	E63	.906	12094	30.0	10	1N		C	0626	1.37	3.03	5.00	72	Z
CROM	25	0624	0633	0627	S14	E59	.879	12094	29.7	9	-N	2	C	0627	.97	2.04			
CATA	25	0638E	0635	0630	S13	E62	.900	12094	29.9	50	1N	1		0630	1.16	2.65		(195)	
ATHN	25	0634E	0644D	0634U	S10	E58	.863	12094	29.6	100	1N	1	V		1.65				6
CROM	26	0634	0635	0634	S10	E59	.872	12094	29.7	1	-N	2	C	0634	.54	1.09			
6 STATIONS REPORTING GROUP 46608.					1 STATIONS OBSERVING AND NOT REPORTING.														
GRP46608	25	0755	0833	0758	S09	E64	.909	12094	30.1	38	1N				1.64				4 4 4 6
TACH	25	0754	0823D	0800	S07	E67	.927	12094	30.4	290	2F		C	0800	2.83		3.16	57	E
CROM	25	0756E	0822	0756U	S10	E64	.918	12094	30.1	260	-N	3	V	0822	.40				
UPIC	25	0756	0811D		S10	E63	.903	12094	30.1	150	1N		P	0805	1.68	1.98			TIF
BUCA	25	0759E	0855D		S09	E63	.901	12094	30.1	560	1N		C	0800	1.68				
46608	25	0800	0846	0815	S09	E63	.901	12094	30.1	40	*-N				.95				2 2 2 7
CATA	25	0800	0840	0815	S10	E63	.903	12094	30.1	40	-N	3		0815	.69	1.61		(214)	
ARCE	25	0810E	0852D		S08	E63	.900	12094	30.1	340	1N		C	0820	1.20	2.70			
GRP46610	25	0953	1001	0957	S10	E55	.837	12094	29.5	8	-B				.66				2 2 2 3
ARCE	25	0952E	1000D		S10	E54	.828	12094	29.5	80	-B		C	0955	.66	1.20			
TEHR	25	0954	1001	0957	S10	E55	.837	12094	29.5	7	-N	4	V		.66				F
GRP46611	25	1004	1051	1006	S13	E58	.869	12094	29.8	47	1B				2.07				3 2 2 4
TEHR	25	1004	1041	1006	S12	E56	.867	12094	29.8	37	1B	4	V		1.82				F
CATA	25	1018E	1100D	1018	S13	E58	.869	12094	29.8	500	1B	2		1010	2.31	4.66		(331)	Z
HEUO	25	1026E	1045		S15	E60	.889	12094	29.9	190	-N		C	1027	1.03	2.08			
GRP46612	25	1135	1145	1136	S08	E56	.842	12094	29.7	10	1N				2.27				2 1 1 4
HEUO	25	1135	1145	1136	S07	E55	.831	12094	29.8	10	1N		C	1136	2.27	4.80			E
RAMY	25	1144E	1145D		S08	E56	.842	12094	29.7	1D	-N	1	C						DE
GRP46614	25	1458	1511	1502	S13	E50	.797	12094	29.4	13	-N				1.01				6 6 6 6
MCMA	25	1457	1515	1502	S13	E50	.797	12094	29.4	18	1B		C	1502	1.29	2.18			EV
BOUL	25	1457	1510	1503	S14	E48	.788	12094	29.2	13	-N	2	V	1503	1.18	2.88			
HEUO	25	1458	1507	1502	S12	E50	.794	12094	29.4	9	-N		C	1502	1.13	1.88			E
RAMY	25	1458	1510	1502	S12	E52	.814	12094	29.5	12	-N	2	C		1.39				DE
CATA	25	1500E	1500D	1500	S12	E50	.794	12094	29.4		-B	3		1500	.87	1.42		(219)	
CAPS	25	1505E	1511D		S16	E49	.797	12094	29.3	6D	-N	2	S	1507	.38	.68		(182)	
GRP46615	25	1540	1602	1550	S11	E56	.848	12094	29.9	22	-F				.26				2 2 1 3
MCMA	25	1531	1602	1550	S12	E56	.858	12094	29.8	31	-N		C						
MCMA	25	1531	1602	1533	S12	E56	.858	12094	29.8	31	-N		C	1533	.72	1.38			EK
HUAN	25	1548	1600U		S09	E55	.835	12094	29.8	12D	-F	1	C	1550	.26	.46			
46615	25	1602	1614	1602	S16	E60	.891	12094	30.2	12	*-F				.28				2 2 2 3
MCMA	25	1601	1620D	1602	S15	E59	.881	12094	30.1	190	-F		C	1602	.41	.80			D
HUAN	25	1602	1607		S16	E60	.891	12094	30.2	5	-F	1	C	1604	.15	.31			D
GRP46616	25	1624	1639	1626	S15	E59	.881	12094	30.1	15	--F				.40				4 4 3 4
HUAN	25	1620	1634D	1625	S15	E58	.873	12094	30.0	140	-N	1	C	1625	.41	.81			E
RAMY	25	1623	1637	1626	S13	E57	.861	12094	30.0	14	-F	2	C		.37				DE
MCMA	25	1625E	1643D		S15	E59	.881	12094	30.1	18D	-N		P	1625	.41	.80			E
BOUL	25	1626	1636	1626	S15	E60	.889	12094	30.2	10	-F	3	V						
GRP46618	25	1740	1758	1744	S14	E49	.798	12094	29.4	10	--F				.40				3 3 3 5
HUAN	25	1740	1748		S13	E49	.787	12094	29.4	8	-N	1	P	1745	.36	.58			E
PALE	25	1748	1758	1745	S16	E48	.787	12094	29.3	10	-F	2	V		.31				
RAMY	25	1741E	1751D	1742U	S13	E51	.807	12094	29.6	10D	-F	2	V		.52				DE
GRP46619	25	1915	1940	1926	S07	E54	.821	12094	29.9	25	--B				.69				3 3 3 4
MCMA	25	1915	1948	1926	S08	E53	.814	12094	29.8	25	-B		C	1926	.52	.98			EHV
HUAN	25	1915	1930D		S08	E53	.814	12094	29.8	15D	-B	1	P	1928	.52	.88			
PALE	25	1916E	1927D	1925	S06	E55	.829	12094	29.9	11D	-B	2	V		1.03				
620 MCMA	25	1958	2008D	1958	S10	E50	.788	12094	29.6	10D	-N		C	1958	.62	1.08			E 3
621 BOUL	25	2159	2212	2159U	S12	E49	.784	12094	29.6	13	1N	3	V	2203	1.88	2.78			1
GRP46622	25	2239	2252	2241	S10	E47	.757	12094	29.5	13	-B				.63				2 2 2 4
VORO	25	2239	2252	2240	S08	E45	.728	12094	29.3	13	-B		C	2240	.74	1.87		67	D
PALE	25	2239E	2244D	2241	S12	E48	.774	12094	29.5	5D	-N	1	V		.52				F
GRP46624	25	2327	2340	2328	S13	E46	.756	12094	29.4	13	1B				1.78				3 3 3 3
PALE	25	2327E	2329D	2329U	S12	E46	.753	12094	29.4	2D	-B	1	V		1.83				F
VORO	25	2327	2334	2328	S12	E46	.753	12094	29.4	7	1B		C	2328	1.94	2.92		95	D
CULG	25	2327	2345	2328	S16	E46	.768	12094	29.4	18	1N		C	2328	2.37	3.58			V

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					APPROX.		CENTRAL	MCMATH	CMP										
	DATE 1972 OCT	START	END	MAX. PHASE	LAT.	MER. DIST.	DISTANCE	PLAGE REGION	DAY	MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hg	MAX. INT. %	
GRP46625	25	2343	2352	2347	S14	E53	.828	12094	30.8	9	-N				.53				2 2 2 3
VORO	25	2343	2352	2345	S14	E55	.846	12094	30.1	9	-B		C	2345	.74	1.34		88	D
PALE	25	2347E	2349D	2348U	S13	E58	.797	12094	29.7	2D	-F	1	V		.31				F
GRP46626	26	0001	0026	0009	S15	E53	.831	12094	30.0	25	-N				.78				2 2 2 3
VORO	26	0001	0014	0004	S11	E52	.811	12094	29.9	13	-B		C	0004	.84	1.39		79	D
VORO	26	0004	0022	0005	S15	E54	.848	12094	30.1	18	-B		C	0005	.65	1.14		77	D
MITK	26	0011E	0038D	0014	S17	E53	.837	12094	30.0	19D	-F		P	0014	.72	1.38			D
GRP46628	26	0159	0219	0208	S13	E49	.787	12094	29.8	20	-B				.91				2 2 2 4
PALE	26	0158	0226D	0208	S13	E50	.797	12094	29.8	28D	-N	1	V		.62				F
VORO	26	0159	0204	0159	S12	E48	.773	12094	29.7	5	-B		C	0159	1.28	1.88		88	E
VORO	26	0207	0212	0209	S12	E49	.784	12094	29.8	5	-B		C	0209	1.82	1.99		93	D
GRP46629	26	0315	0325	0316	S10	E48	.767	12094	29.7	10	-N				.77				2 2 2 2
CRON	26	0315E	0324	0315U	S11	E48	.778	12094	29.7	9D	-N	2	V	0315	.80				
TEHR	26	0316E	0326	0316U	S08	E47	.751	12094	29.7	10D	-N	2	V		.74				F
GRP46631	26	0641	0721	0651	S12	E47	.763	12094	29.8	40	1B				4.11				8 7 7 8
TEHR	26	0637	0736	0655	S12	E47	.763	12094	29.8	59	1B	4	V		4.29				F U
TACH	26	0638	0719	0649	S12	E58	.794	12094	30.0	41	2N		C	0649	5.93	9.47	5.24	117	EFK
CATA	26	0648	0645D	0648	S09	E46	.742	12094	29.7	5D	-N	3		0640	.29	.43		(191)	
CRON	26	0646	0704	0651	S14	E47	.778	12094	29.8	18	1N	2	C	0651	2.15	3.48			
MANI	26	0646E	0648	0648	S12	E48	.773	12094	29.9	2D	2B	1		0648	5.18	8.05			
ATHN	26	0650E	0715D	0650U	S10	E44	.723	12094	29.6	25D	1B	1	V		3.38				Z U
CATA	26	0650E	0740	0650	S12	E47	.763	12094	29.8	50D	1B	1		0650	1.73	2.66		(388)	Z
WEND	26	0652E	0721		S11	E46	.749	12094	29.7	29D	2N		V		6.19				
WEND	26	0652E	0717		S13	E50	.797	12094	30.0	25D	1N		V		3.89				
UPIC	26	0719E	0747		S14	E45	.749	12094	29.7	28D	1N		P	0719	2.73				TB
GRP46632	26	0928	0953	0923	S13	E42	.712	12094	29.5	33	-B				.93				5 5 5 9
ATHN	26	0910E	0927	0912	S08	E45	.728	12094	29.8	17D	-N	2	V		.66				DE
ATHN	26	0917	0948	0921	S14	E48	.695	12094	29.4	23	-B	2	V		.99				DE Z
CRON	26	0918	1012	0924	S14	E41	.786	12094	29.5	54	-N	3	V	0924	.80				
MONT	26	0919E	0932D	0929	S08	E45	.728	12094	29.8	13D	-N		C	0929	.72				
MONT	26	0928	0932D	0923	S14	E41	.706	12094	29.5	12D	-B		C	0923	1.86				
CAPS	26	0921E	0938D		S16	E41	.715	12094	29.5	17D	-B	3	V	0925	.48	.60		(325)	CH
CATA	26	0925	0948	0925	S13	E41	.701	12094	29.5	15	-N	3		0925	.58	.81		(191)	
ATHN	26	0935E	0946	0937	S08	E45	.728	12094	29.8	11D	-N	2	V		.16				DE
GRP46633	26	1114	1123	1118	S09	E44	.720	12094	29.8	9	-N				.94				3 3 3 7
UPIC	26	1112	1123	1116	S08	E44	.717	12094	29.8	11	-F		P	1116	1.29				TIE
CATA	26	1115	1125	1120	S09	E43	.708	12094	29.7	10	-B	3		1120	1.16	1.64		(214)	
HUAN	26	1116E	1121		S09	E44	.720	12094	29.8	5D	-N	1	P	1117	.36	.51			E
GRP46637	26	1254	1326	1257	S08	E43	.705	12094	29.8	32	1N				2.63				5 5 5 6
MCMA	26	1254	1322D	1256	S08	E42	.693	12094	29.7	28D	1N		C	1256	1.44	2.08			EV
CANR	26	1254	1302	1257	S09	E43	.708	12094	29.8	8	1N	2	C	1257	2.26	3.25			
UPIC	26	1255	1318	1256	S08	E43	.705	12094	29.8	23	1B		P	1256	1.68				TIC
ARCE	26	1256E	1339D		S09	E42	.696	12094	29.7	43D	2B		C	1332	4.80	6.70			K
RAMY	26	1257E	1347	1257U	S08	E44	.717	12094	29.8	50D	1N	2	C		2.97				F
GRP46638	26	1326	1353	1333	S05	E43	.696	12094	29.8	27	1B				5.35				5 5 5 5
RAMY	26	1257E	1347	1331U	S08	E44	.717	12094	29.8	50D	1B	2	C		3.98				F
MCMA	26	1323	1405	1332	S05	E43	.696	12094	29.8	42	2B		C	1332	3.61	5.00			FL
CATA	26	1325E	1355	1338	S09	E42	.696	12094	29.7	38D	1B	3		1330	2.90	4.03		(331)	
CANR	26	1327	1340	1334	S06	E41	.674	12094	29.6	13	1N	2	C	1334	2.69	3.63			
UPIC	26	1327	1347D	1335U	S08	E42	.693	12094	29.7	28D	1B		P	1335	3.57				TFIC
RAMY	26	1338	1358D	1332	S03	E45	.715	12094	29.9	28D	1N	2	C		2.12				F
CATA	26	1338	1355	1335	S02	E43	.689	12094	29.8	25	1B	3		1335	2.82	2.79		(219)	
UPIC	26	1331	1347D	1335U	S02	E43	.689	12094	29.8	16D	1N		P	1335	2.73				TC
CANR	26	1333	1350	1338	S01	E46	.723	12094	30.0	17	1B	3	V	1338	3.28	5.00			
642 MCMA	26	1908	1914	1910	S08	E39	.656	12094	29.7	6	--F		C	1910	.31	.48			D 3
643 HUAN	26	2026E	2035		S08	E38	.644	12094	29.7	9D	--F	1	P	2028	.15	.20			D 2
	26	2112	2245	NO FLARE PATROL															
645 PALE	26	2124E	2157	2127U	S10	E39	.664	12094	29.8	33D	-N	2	V		.83				F 1
645 PALE	26	2124E	2157	2145U	S10	E39	.664	12094	29.8	33D	*-B	2	V		1.34				F 1
	26	2358	0008	NO FLARE PATROL															

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MONATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP46646	27	0132	0155	0140	S13	E37	.654	12094	29.8	23	-N				1.61				4 4 4 4
MITK	27	0126	0203	0140	S15	E37	.665	12094	29.8	37	1N		C	0140	2.27	3.16			
CRON	27	0127	0155	0142	S12	E34	.613	12094	29.6	28	-N	3	V	0155	1.20				
PALE	27	0136E	0146D	0139	S12	E37	.649	12094	29.8	10D	-F	2	V		.67				F
VORO	27	0139	0147	0140	S11	E38	.656	12094	29.9	8	1N		C	0140	2.31	2.99		71	D
GRP46647	27	0310	0320	0311	S09	E36	.622	12094	29.8	10	-N				.90				4 4 4 4
CRON	27	0308	0317	0312	S09	E35	.609	12094	29.8	9	-N	3	V	0312	.80				
PALE	27	0308	0317	0310	S09	E36	.622	12094	29.8	9	-N	2	V		.52				DE
MITK	27	0310	0324	0311	S10	E35	.614	12094	29.8	14	-N		C	0311	1.34	1.70			E
VORO	27	0312	0322	0312	S06	E36	.610	12094	29.8	10	-B		C	0312	.93	1.13		68	E
GRP46648	27	0352	0401	0355	S12	E34	.613	12094	29.7	9	--F				.90				3 3 3 3
MITK	27	0348	0356	0349	S14	E35	.636	12094	29.8	8	-F		C	0349	1.13	1.40			E
TEHR	27	0352E	0357D	0352U	S11	E34	.607	12094	29.7	5D	-N	1	V		.66				F
MITK	27	0354	0408	0357	S12	E35	.625	12094	29.8	6	-F		C	0357	1.44	1.80			H
CRON	27	0355	0401	0355U	S12	E33	.600	12094	29.6	6	-F	3	V	0355	.60				
GRP46649	27	0618	0629	0620	S12	E35	.625	12094	29.9	11	--F				.50				2 2 2 5
ATHN	27	0618	0638	0620	S12	E35	.625	12094	29.9	12	-F	2	C		.33				DE
TEHR	27	0619E	0628	0619U	S12	E34	.613	12094	29.8	9D	-N	3	V		.66				F
GRP46651	27	1009	1023	1010	S15	W70	.952	12086	22.2	14	-N				.68				2 2 2 4
ATHN	27	1009E	1028	1009U	S14	W69	.945	12086	22.2	19D	-N	3	V		.66				DE
TEHR	27	1009E	1018	1018U	S15	W70	.952	12086	22.2	9D	-N	2	V		.66				F
GRP46652	27	1106	1123	1113	S14	E33	.613	12094	29.9	17	-B				.76				2 2 2 5
RAMY	27	1106	1125	1111	S14	E33	.613	12094	29.9	19	-N	2	C		.65				DE
CATA	27	1115E	1128	1115	S14	E32	.601	12094	29.9	5D	-B	2		1115	.87	1.08		(289)	
GRP46654	27	1211	1223	1214	S11	E25	.493	12094	29.4	12	--N				.66				4 3 3 5
RAMY	27	1211	1225	1212	S07	E24	.458	12094	29.3	14	-F	4	V		.41				DE H
ATHN	27	1214E	1228	1214U	S12	E27	.526	12094	29.5	6D	-N	3	V		.99				DE
CATA	27	1215E	1215D	1215	S13	E25	.509	12094	29.4		-B	3		1215	.56	.67		(245)	
CANR	27	1225	1237	1228	S07	E29	.519	12094	29.7	12	-N	2	C	1228	.43	.56			
GRP46656	27	1448	1457	1443	S13	E26	.521	12094	29.6	17	--F				.25				2 2 2 3
RAMY	27	1448E	1455	1441U	S12	E26	.513	12094	29.6	15D	-F	4	V		.28				DE
HCMA	27	1448	1458	1445	S13	E26	.521	12094	29.6	18	-N		C	1445	.21	.30			DH
657 HCMA	27	1519	1608D	1522	S12	E26	.513	12094	29.6	41D	--F		C	1522	.41	.56			EH 3
GRP46658	27	1604	1624	1612	S14	E25	.518	12094	29.5	20	--F				.38				2 2 2 3
HCMA	27	1604	1625	1613	S12	E23	.476	12094	29.4	21	-N		C	1613	.26	.30			D
RAMY	27	1610E	1623	1611U	S13	E25	.509	12094	29.5	13D	-F	4	V		.46				DE
HCMA	27	1618	1635	1623	S10	E28	.506	12094	29.8	17	-F		C	1623	.93	1.10			EFL
GRP46659	27	1707	1716	1710	S11	E22	.455	12094	29.4	9	--N				.38				3 3 3 3
HCMA	27	1707	1716	1711	S12	E22	.464	12094	29.4	9	-N		C	1711	.21	.30			E
RAMY	27	1707E	1716	1709	S09	E22	.438	12094	29.4	9D	-F	4	V		.37				DE
HUAN	27	1710E	1711D		S13	E23	.485	12094	29.4	1D	-N	1	P	1710	.31	.36			H
GRP46660	27	1744	1802	1752	S11	E26	.505	12094	29.7	18	--N				.55				3 3 3 3
RAMY	27	1743	1802D	1752U	S11	E23	.467	12094	29.5	19D	-N	3	V		.66				DE
RAMY	27	1743	1802D	1746U	S11	E23	.467	12094	29.5	19D	-F	3	V		.46				DE
HUAN	27	1744	1800D	1753U	S13	E27	.533	12094	29.8	16D	-N	1	P	1753	.46	.55			E
PALE	27	1748E	1754D	1750U	S10	E27	.511	12094	29.8	6D	-F	2	V		.52				F
	27	1801	1807	NO FLARE PATROL															
	27	1813	1838	NO FLARE PATROL															
661 PALE	27	1838E	1837	1831U	S09	E26	.491	12094	29.7	7D	--F	2	V		.46				F 1
GRP46662	27	1845	1929	1857	S15	E25	.526	12094	29.7	44	1N				3.11				4 4 4 4
PALE	27	1845	1938D	1857	S13	E24	.497	12094	29.6	58D	1N	2	V		3.62				DE
RAMY	27	1845E	1922	1856	S14	E23	.494	12094	29.5	37D	1N	2	V		4.29				F
RAMY	27	1845E	1922	1851	S14	E23	.494	12094	29.5	37D	1N	2	V		2.97				F
HCMA	27	1847E	1902D		S19	E25	.563	12094	29.7	15D	1B		P	1858	2.86	2.98			EFL
HUAN	27	1849E	1914D		S15	E28	.561	12094	29.9	25D	1N	1	P	1849	2.27	2.73			I
663 RAMY	27	1957E	2005	1957U	S04	W76	.972	12085	22.1	8D	--F	3	V		.66				DE 1
664 RAMY	27	1957	2014	1959	S11	E22	.455	12094	29.5	17	-N	3	V		.99				DE 1
	27	2031	2236	NO FLARE PATROL															
	27	2351	2352	NO FLARE PATROL															

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		CONF.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH HG	MAX. INT. %	
	1972 OCT																		
	27	2356	0003	NO FLARE PATROL															
	28	0013	0029	NO FLARE PATROL															
	28	0058	0118	NO FLARE PATROL															
666 VORO	28	0322	0342	0323	S13	E25	.588	12094	30.8	20	--B		C	0323	.74	.85		64	D 3
GRP46667	28	0350	0436	0405	S15	E24	.514	12094	30.8	46	-N				2.80				3 3 3 4
VORO	28	0350	0446	0359	S16	E23	.512	12094	29.9	56	1N		C	0446	2.48	2.75		72	E
KODA	28	0351E	0421	0411	S16	E26	.546	12094	30.1	30D	-B		V	0411	1.95	1.90	2.04		D
TEHR	28	0405E	0441	0405U	S13	E23	.484	12094	29.9	36D	-F				1.65				F
46667	28	0422	0448	0423	S16	E22	.502	12094	29.8	18	*1B				3.32				4 4 4 4
TEHR	28	0405E	0441	0420	S13	E23	.484	12094	29.9	36D	1B				3.30				
CRON	28	0420	0433	0423	S17	E20	.491	12094	29.7	13	1N	2	C	0423	2.26	2.61			
VORO	28	0421	0446	0421	S16	E23	.512	12094	29.9	25	1N		C	0421	2.87	2.99		76	EL
KODA	28	0426	0431D	0429	S16	E23	.512	12094	29.9	5D	1B		F	0429	4.84	4.80	2.36		EH
669 TEHR	28	0453	0548D	0458	S13	E22	.472	12094	29.9	47D	--N				.58				DE 2
GRP46672	28	0640	0701	0648	S14	E22	.482	12094	29.9	21	-B				1.22				2 2 2 4
CATA	28	0640E	0705D	0645	S14	E20	.459	12094	29.8	25D	-B	3		0645	1.44	1.63		(245)	
TEHR	28	0645E	0656	0650	S13	E23	.484	12094	30.8	11D	-N				.99				F
4 STATIONS REPORTING GROUP 46674. 1 STATIONS OBSERVING AND NOT REPORTING.																			
GRP46674	28	0923	0953	0928	S15	E18	.448	12094	29.7	30	--N				.54				2 2 2 4
TEHR	28	0923E	0936	0925	S15	E20	.470	12094	29.9	13D	-N				.58				F
CATA	28	0930E	1010	0930	S14	E16	.416	12094	29.6	40D	-N	3		0938	.58	.63		(195)	
46674	28	0944	1005	0947	S14	E18	.437	12094	29.8	21	*-F				1.16				2 2 2 6
ATHN	28	0943E	1003	0943U	S13	E17	.415	12094	29.7	20D	-F	2	V		.83				DE
HERS	28	0944	1006	0958	S14	E18	.437	12094	29.8	22	-F		C	0946	1.49	1.78			DL
GRP46675	28	1013	1029	1016	S15	E19	.459	12094	29.9	16	--N				.72				5 5 5 5
TEHR	28	1010E	1024	1012	S16	E17	.450	12094	29.7	14D	-N				.66				DE
CRON	28	1012	1015D	1015U	S12	E23	.475	12094	30.1	3D	-F	3	V	1015	.48				
CANR	28	1013	1030	1016	S17	E20	.491	12094	29.9	17	-F	1	V		1.88	1.88			
ATHN	28	1014E	1026	1015	S15	E18	.448	12094	29.8	12D	-N	2	V		.66				DE
CATA	28	1015	1035	1020	S16	E18	.460	12094	29.8	28	-B	3		1020	.87	.97		(240)	
GRP46677	28	1239	1258	1245	S06	W88	1.000	12085	21.9	11	-N				.69				2 2 1 6
RAHY	28	1232E	1258D		S05	W85	.997	12085	22.1	18D	-N	2	V						DE
RAHY	28	1232E	1258D		S05	W85	.997	12085	22.1	18D	-F	2	V						DE
CATA	28	1245	1258D	1245	S07	W90	1.000	12085	21.8	5D	1N	2		1245	.69			(150)	
GRP46681	28	1531	1539	1532	S07	E14	.314	12094	29.7	8	--N				.42				2 2 2 3
RAHY	28	1530E	1540	1530U	S06	E14	.303	12094	29.7	18D	-N	3	V		.52				DE
HUAN	28	1531	1539	1534	S07	E14	.314	12094	29.7	8	-N	1	C	1534	.31	.32			
RAHY	28	1531E	1539	1532	S07	E13	.301	12094	29.6	8D	-N	2	C		.46				DE
682 HUAN	28	1618	1621	1618	S13	E16	.484	12094	29.9	3	--F	2	C	1618	.21	.22			O 2
683 HUAN	28	1622	1626D		S11	E15	.378	12094	29.8	4D	--F	1	P	1626	.21	.22			O 2
GRP46684	28	1708	1733	1717	S14	E15	.406	12094	29.8	33	-N				1.55				2 2 2 3
HUAN	28	1708	1717D		S15	E15	.419	12094	29.8	17D	-N	1	P	1716	1.34	1.47			E
PALE	28	1712E	1733	1717	S13	E15	.394	12094	29.8	21D	-N	2	V		1.75				DE
GRP46685	28	1752	1911	1801	S09	E67	.928	12099	2.8	79	1B				1.21				2 2 2 4
HUAN	28	1752	1911D		S10	E67	.929	12099	2.8	79D	1N	1	P	1810	.98				L
PALE	28	1756E	1805D	1801	S08	E67	.927	12099	2.8	9D	1B	2	V		1.44				FDE
687 HUAN	28	1805	1812	1807	S10	E18	.306	12094	29.5	7	--N	1	C	1807	.31	.32			H 3
688 HUAN	28	1829	1838	1831	S13	E13	.374	12094	29.7	9	--F	1	C	1831	.62	.67			E 2
689 HUAN	28	1833	1845U		S08	W98	1.000	12085	22.8	12D	--F	1	C	1838	.26				3
690 RAHY	28	1942E	2000D	1942	S15	E12	.392	12094	29.7	18D	--F	4	V		.33				DE 1
	28	2012	2042	NO FLARE PATROL															
	28	2134	2258	NO FLARE PATROL															
	28	2325	0016	NO FLARE PATROL															

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MOUNT PLAGE REGION	CMP DAY	MIN.		CONF.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP46691	29	0037	0059	0042	S10	E04	.263	12094	29.3	22	-N				1.71				3 3 3 3
CRON	29	0036	0053	0042	S10	E04	.263	12094	29.3	17	-N	2	C	0042	1.18	1.19			
CULG	29	0037	0105	0041	S09	E04	.246	12094	29.3	28	1N		C	0041	3.30	3.40			
VORO	29	0037	0058	0042	S11	E05	.284	12094	29.4	21	-B		C	0042	.65	.67		74	DH
	29	0152	0159	NO FLARE PATROL															
GRP46692	29	0223	0236	0224	S11	E06	.289	12094	29.5	13	--N				.72				3 3 3 4
MANI	29	0222	0239	0223	S11	E04	.279	12094	29.4	17	-N	2		0223	.93	.96			
VORO	29	0223	0232	0225	S12	E06	.305	12094	29.5	9	-B		C	0225	.84	.87		62	D
CRON	28	0225E	0225D		S11	E05	.284	12094	29.5		-N	1	V		.40				
MANI	29	0237E	0312	0311	S11	E13	.348	12094	30.1	350	-N	2		0311	.83	.87			
GRP46693	29	0257	0332	0311	S13	E07	.326	12094	29.6	35	1N				2.07				4 3 3 4
VORO	29	0257	0354	0306	S12	E07	.311	12094	29.6	57	1N		C	0306	2.77	2.95		67	E
MANI	29	0311E	0312	0311	S12	E07	.311	12094	29.7	1D	-N	2		0311	1.03	1.08			
CRON	29	0315E	0330	0315U	S15	E08	.362	12094	29.7	15D	1N	1	V	0315	2.40				
TEHR	29	0341E	0402	0341U	S14	E07	.341	12094	29.7	21D	-N	1	V		.99				F
GRP46696	29	0547	0615	0558	S09	E07	.265	12094	29.8	28	--F				.93				2 2 2 3
RAMY	29	0538E	0616	0559U	S07	E06	.227	12094	29.7	38D	-N	3	V		1.03				DE
TEHR	29	0555	0613	0601	S11	E07	.295	12094	29.8	18	-F	3	V		.83				F
GRP46699	29	0804	0824	0808	S16	E06	.367	12094	29.8	28	--N				.78				5 5 4 7
TEHR	29	0808	0825	0806	S15	E06	.351	12094	29.8	25	-N				.58				DE
ISTA	29	0802	0838		S15	E06	.351	12094	29.8	28	-N								E
ATHN	29	0804E	0819	0806	S17	E07	.367	12094	29.9	15D	-N	2	V		.66				F
CATA	29	0805	0828	0810	S16	E07	.372	12094	29.9	15	-B	3		0810	.58	.62		(214)	
ARCE	29	0807	0825	0809	S15	E06	.351	12094	29.8	18	-N		C	0809	1.07	1.18			
GRP46700	29	0928	0953	0935	S10	E08	.254	12094	29.4	25	-B				1.03				6 6 5 6
ISTA	29	0925	0956	0932	S10	E02	.256	12094	29.5	31	-B								
TEHR	28	0928E	0954	0931	S09	E01	.237	12094	29.5	26D	-N	3	V		.66				DE
CRON	29	0929U	0947	0932	S09	W02	.239	12094	29.2	18D	-F	2	C	0932	.75	.75			
ARCE	29	0931	0958	0937	S10	E08	.254	12094	29.4	19	-B		C	0937	1.83	1.98			
CATA	29	0935E	0955	0935	S10	W01	.254	12094	29.3	20D	-B			0935	.87	.89		(355)	
LOCA	28	0940E	0955	0940	S11	W01	.271	12094	29.3	15D	-B		V	0940	1.05	1.18			
GRP46701	29	1058	1115	1055	S09	W02	.239	12094	29.3	25	--F				.45				2 2 2 6
RAMY	29	1058E	1123	1055	S09	W02	.239	12094	29.3	33D	-N	2	C		.56				DE
TEHR	29	1058	1107	1054	S09	W01	.237	12094	29.4	17	-F	3	V		.33				F
703 RAMY	29	1245	1256	1247	S07	E02	.206	12094	29.7	11	--F	2	C		.37				DE 4
705 HUAN	28	1436	1453U		S10	W04	.263	12094	29.3	17D	--F	1	C	1444	.21	.21			D 3
3 STATIONS REPORTING GROUP 46706.					8 STATIONS OBSERVING AND NOT REPORTING.														
GRP46706	29	1613	1626	1616	S15	W02	.339	12094	29.5	13	-B				.62				3 3 3 3
CANR	29	1612	1623	1617	S16	W02	.355	12094	29.5	11	-N	2	C	1617	.54	.57			
HUAN	29	1613	1626	1616	S15	W02	.339	12094	29.5	13	-B	2	C	1616	.57	.60			E
RAMY	29	1613	1620	1616	S14	W01	.321	12094	29.6	15	-B	3	V		.74				DE
46706	29	1758	1804	1752	S13	W03	.308	12094	29.5	14	*-N				.47				2 2 2 2
RAMY	28	1748	1759D	1750	S10	W01	.254	12094	29.7	11D	-N	3	C		.58				ZDE
HUAN	29	1751	1804	1753	S16	W04	.360	12094	29.4	13	-N	1	C	1753	.36	.39			
46706	29	1544	2020	1747	S10	E05	.268	12094	30.0	276	*2N				3.61				3 1 1 3
HUAN	29	1544	2020D		S10	E05	.268	12094	30.0	276D	2N	1	C	1926	3.61	3.78			IK
CANR	29	1558	1618	1603	S10	E07	.288	12094	30.2	12	-N	2	V	1605	.60	.60			
RAMY	29	1925E	1945D	1938U	S15	W04	.344	12094	29.5	20D	-F	3	V		.99				DE
707 RAMY	29	2044	2054	2046	S15	W05	.347	12094	29.5	18	--N	3	V		.46				DE 1
GRP46709	29	2346	0003	2349	S16	W08	.377	12094	29.4	17	-N				1.41				2 2 2 2
CULG	29	2345	0003	2348	S15	W07	.357	12094	29.5	18	1N		C	2348	2.06	2.18			
CRON	29	2346	2351D	2349	S16	W08	.377	12094	29.4	5D	-N	2	C	2349	.75	.81			
	29	2359	0008	NO FLARE PATROL															
46709	30	0011	2538	0011	S15	W07	.355	12094	29.5	959	*-N				1.88				2 1 1 3
CULG	29	2348E	0138	0013	S16	W01	.354	12094	29.9	102D	1F		C	0013	2.06	2.18			
CRON	30	0011E	0024	0011U	S15	W07	.355	12094	29.5	13D	-N	3	V	0011	1.88				
46709	30	0040	0103	0044	S17	W02	.370	12094	29.9	23	*-N				1.24				2 2 2 3
MANI	30	0040E	0048	0048	S17	W01	.368	12094	30.0		-N	2		0048	1.34	1.44			
MITK	30	0046E	0125	0048	S17	W02	.370	12094	29.9	39D	-N		C	0048	1.13	1.21			H

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS					REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT.	APPROX. LONG. DIST.	CENTRAL DISTANCE	NOMATH PLAGE REGION	CMP DAY	MIN.				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
	1972 OCT																		
GRP46718	30	0142	0158	0145	S09	W09	.281	12094	29.4	16	-B		C		.63				2 2 2 3
VORO	30	0142	0159	0146	S09	W08	.272	12094	29.5	17	-B		C	0146	.65	.67		62	E
CRON	30	0143E	0157	0143U	S08	W09	.267	12094	29.4	140	-N	3	V	0143	.60				
VORO	30	0144	0155	0146	S10	W10	.304	12094	29.3	11	-N		C	0146	1.29	1.32		59	D
GRP46711	30	0229	0243	0231	S08	W01	.219	12094	30.0	14	--N				.37				2 1 1 3
VORO	30	0229	0243	0231	S08	W01	.219	12094	30.0	14	-N		C	0231	.37	.37		60	D
CRON	30	0230E	0243	0232	S13	W10	.345	12094	29.4	13D	-N	3	V	0232	.50				
GRP46712	30	0411	0432	0418	S14	W02	.321	12094	30.0	21	--F				.52				2 1 1 4
MITK	30	0411	0432	0418	S14	W02	.321	12094	30.0	21	-F		C	0418	.52	.60			D
KODA	30	0417E	0515	0503	S14	W06	.334	12094	29.7	58D	-N		C	0417	1.36	1.30			E
713 CRON	30	0517	0526		S11	W10	.317	12094	29.5	11	--N	3	V		.50				2
714 CRON	30	0620	0635		S13	W11	.354	12094	29.4	15	--N				.30				2
8 STATIONS REPORTING GROUP 46715. 1 STATIONS OBSERVING AND NOT REPORTING.																			
GRP46715	30	0735	0822	0759	S09	W04	.245	12094	30.0	47	1N				3.48				6 5 4 9
CATA	30	0735E	0750D	0745	S09	W04	.245	12094	30.0	15D	1N	3		0745	3.76	3.88		(288)	
ISTA	30	0735E	0807		S11	W05	.282	12094	29.9	32D	1N								B
WEND	30	0742E	0832		S11	W03	.274	12094	30.1	50D	2B		P		2.06				
CAPF	30	0745E	0830		S09	W06	.256	12094	29.9	45D	2N		P	0753	5.36	5.46			B
ARCE	30	0755E	0820D		S06	W02	.187	12094	30.2	25D	1N		C	0755	2.74	2.80			B
TEHR	30	0813E	0852D	0813U	S13	W04	.310	12094	30.0	39D	1B				3.71				DEH
46715	30	0722	0813	0731	S10	W03	.257	12094	30.1	51	*1B				3.51				2 2 2 3
CRON	30	0722	0805	0731	S10	W04	.261	12094	30.0	43	1N	2	C	0731	3.01	3.81			
CAPS	30	0723E	0820D	0730	S09	W02	.238	12094	30.2	57D	1B	2	P	0730	4.00	4.20		(420)	
46716	30	0845	0935	0914	S13	W08	.331	12094	29.8	50	--F				.63				3 2 1 8
ARCE	30	0841E	0908D		S12	W13	.359	12094	29.4	19D	-F		C	0846	.86	.90			
ISTA	30	0845	0931		S13	W10	.345	12094	29.6	46	-F								E
UPIC	30	0908E	0941	0914	S12	W08	.316	12094	29.8	33D	-N		P	0914	.63				TIE
UPIC	30	0908E	0938	0914U	S12	W04	.294	12094	30.1	30D	-N		P	0914	.42				TIE
GRP46717	30	0948	1015	0952	S10	W05	.266	12094	30.0	27	-N				2.04				8 8 7 9
UPIC	30	0941	1023	1002	S10	W13	.334	12094	29.4	42	1B		P	1002	2.10				TIF
ARCE	30	0945E	1007D		S10	W04	.261	12094	30.1	22D	-F		C	0950	1.55	1.60			
UPIC	30	0947	1015	0951	S09	W06	.256	12094	30.0	28	-B		P	0951	.63				TI
ISTA	30	0947	1004D		S10	W04	.261	12094	30.1	17D	-N								
CAPS	30	0948E	1038D		S09	W04	.245	12094	30.1	42D	-B	3	V	0950	.80	.88		(270)	
CANR	30	0948	1001	0953	S11	W06	.287	12094	30.0	13	-N	2	C	0953	1.18	1.19			
MEUD	30	0948	1005	0949	S10	W05	.266	12094	30.0	17	-N		C	0949	1.03	1.00			E
WEND	30	0949	1042		S11	W05	.282	12094	30.0	53	2N		V		6.19				
CATA	30	0950	0955D	0955	S10	W05	.266	12094	30.0	5D	-B	3		0955	1.44	1.50		(288)	
GRP46718	30	1034	1042	1036	S13	W18	.345	12094	29.7	8	-B				1.41				4 4 4 7
UPIC	30	1019E	1100	1019	S08	W10	.277	12094	29.7	41D	-N		P	1019	1.05				TIK
UPIC	30	1029	1036	1034U	S11	W07	.294	12094	29.9	7	-F		P	1034	.42				TI
UPIC	30	1029	1041	1036	S14	W12	.376	12094	29.5	12	-B		P	1036	1.68				TI
CANR	30	1034	1042	1036	S11	W08	.301	12094	29.8	8	1B	3	V	1036	1.50	3.88			
MEUD	30	1036	1048		S15	W12	.398	12094	29.5	4	-F		C	1037	1.83	1.10			E
CAPS	30	1036	1043D		S15	W12	.398	12094	29.5	7D	-B	3	V	1038	1.80	1.80		(260)	
GRP46720	30	1217	1235	(1220)	S20	W45	.773	12090	27.1	18	--B				.25				3 2 1 6
WEND	30	1217	1235		S18	W44	.754	12090	27.2	18	-B								
ARCE	30	1220E	1235D		S21	W46	.786	12090	27.1	15D	-N		C	1220	.25	.48			
CAPS	30	1226E	1229D		S21	W45	.777	12090	27.1	3D	-N	1	S						
6 STATIONS REPORTING GROUP 46721. 0 STATIONS OBSERVING AND NOT REPORTING.																			
GRP46721	30	1219	1235	1226	S12	W14	.369	12094	29.5	16	--N				.60				6 6 4 6
WEND	30	1215	1238		S12	W15	.380	12094	29.4	23	-N								
UPIC	30	1218	1247	1227U	S13	W14	.382	12094	29.5	29	-N		P	1227	.85				TI
ARCE	30	1220	1240		S13	W15	.392	12094	29.4	20	-N		C	1224	.44	.50			
UPIC	30	1222	1235	1223	S10	W12	.323	12094	29.6	13	-N		P	1223	1.85				TI
UPIC	30	1223	1255	1247	S07	W11	.275	12094	29.7	32	-F		P	1247	.63				TIK
HUAN	30	1225E	1228		S13	W16	.402	12094	29.3	3D	-F	1	P	1225	.26	.28			
CAPS	30	1226E	1229D		S13	W13	.372	12094	29.5	3D	-N	1	S						
RAMY	30	1229E	1242	1229U	S12	W14	.369	12094	29.5	13D	-F	3	C		.65				DE
721 UPIC	30	1222	1255	1238	S15	W06	.358	12094	30.1	33	*-N		P	1238	.63				TIK 6
GRP46722	30	1351	1402	(1355)	N14	E53	.799	12103	3.6	11	--B				.12				2 2 1 5
ARCE	30	1350	1355		N14	E53	.799	12103	3.6	5	-B		C	1355	.12	.20			D
WEND	30	1352	1408		N13	E52	.788	12103	3.5	16	-N								

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP46724	30	1446	1523	1450	S11	W09	.389	12094	29.9	37	-N				1.92				4 4 4 5
CANR	30	1446	1518	1452	S10	W09	.295	12094	29.9	24	-N	3	V		1.60	1.60			
RAHY	30	1446	1537	1448	S13	W11	.354	12094	29.8	51	-N	3	C		1.11				F
UPIC	30	1447E	1453D		S11	W06	.267	12094	30.2	6D	-N		P	1449	.85				TIE
WEND	30	1458E	1523D		S11	W08	.301	12094	30.0	33D	1F		V		4.13				
GRP46725	30	1502	1517	1508	S19	W47	.787	12090	27.1	15	--N				.21				3 2 1 3
WEND	30	1502	1515		S18	W46	.774	12090	27.2	13	-N								
RAHY	30	1505E	1519	1508	S20	W47	.791	12090	27.1	14D	-N	3	V		.21				F
CANR	30	1505	1517	1508	S07	W48	.758	12090	27.0	12	-N	2	V		.60	.80			
GRP46726	30	1646	1717	1656	S11	W10	.317	12094	29.9	31	-B				2.70				2 2 2 2
HUAN	30	1645	1733	1657U	S10	W09	.295	12094	30.0	48	-B	1	C	1657	1.39	1.36			E
CANR	30	1647	1708	1655	S11	W10	.317	12094	29.9	13	1B	2	V		4.80	4.80			
727 HUAN	30	1734	1758	1736U	S07	W15	.325	12094	29.6	16	--F	1	C	1736	.31	.32			1
	30	1809	1852	NO FLARE PATROL															
	30	1909	1922	NO FLARE PATROL															
	30	1928	1942	NO FLARE PATROL															
	30	1943	1955	NO FLARE PATROL															
	30	2001	2011	NO FLARE PATROL															
729 HUAN	30	2028	2102D	2040U	S17	W12	.417	12094	30.0	34D	--N	1	C	2040	.36	.48			1
	30	2050	2056	NO FLARE PATROL															
	30	2102	2124	NO FLARE PATROL															
GRP46730	30	2305	2335	2307	S13	W13	.372	12094	30.0	30	-N				1.48				2 2 2 4
VORO	30	2305	2335	2307	S14	W13	.385	12094	30.0	30	1N		C	2307	2.03	2.16		67	D
MANI	30	2305	2335	2307	S12	W13	.359	12094	30.0	30	-N	2		2307	.93	.98			
731 VORO	31	0001	0028	0003	S18	W15	.453	12094	29.9	19	--B		C	0003	.65	.71		63	D 3
GRP46731	31	0417	0545	0507	S15	W15	.415	12094	30.1	88	1B				3.37				3 3 3 4
TEHR	31	0417	0547	0506	S18	W11	.422	12094	30.4	90	1B	4	C		4.01				F Z
TEHR	31	0417	0547	0421	S18	W11	.422	12094	30.4	90	1B	4	C		2.65				F Z
MITK	31	0419E	0552	0510	S14	W17	.423	12094	29.9	93D	1B		C	0510	3.92	4.38			F
MANI	31	0448E	0535	0506	S12	W17	.401	12094	29.9	55D	1B	2		0506	2.17	2.35			
MANI	31	0448E	0535	0448	S12	W17	.401	12094	29.9	55D	-B			0448	.77	.84			
GRP46735	31	0618	0622	0614	S17	W14	.432	12094	30.2	12	-B				1.53				2 2 2 2
MITK	31	0609	0619	0614	S18	W17	.478	12094	30.0	10	-F		C	0614	1.13	1.30			E
MITK	31	0609	0634D	0614	S18	W21	.438	12094	29.7	25D	-B		C	0614	.93	1.08			EH
TEHR	31	0611	0625	0613	S20	W09	.439	12094	30.6	14	-N				.99				FH
MITK	31	0622	0634D	0626	S18	W17	.478	12094	30.0	12D	-N		C	0626	1.55	1.80			E
GRP46741	31	1219	1228	1224	S08	W25	.468	12094	29.6	9	-N				1.24				7 6 5 11
UPIC	31	1206	1256	1240	S15	W27	.546	12094	29.5	50	-F		P	1240	.42				I
MONT	31	1215	1226	1224	S08	W24	.454	12094	29.7	12	1N		C	1224	2.58				
RAHY	31	1219	1229	1222	S07	W25	.461	12094	29.6	10	-N	2	C		.65				DE
CATA	31	1220	1225D	1225	S06	W26	.470	12094	29.6	5D	-N	3		1225	.87	.98		(191)	
HUAN	31	1221	1227	1223	S08	W26	.482	12094	29.6	6	-F	1	C	1223					
CANR	31	1223E	1227	1223U	S08	W24	.454	12094	29.7	4D	-N	3	V	1223	1.60	1.60			
TEHR	31	1224E	1231	1225	S09	W22	.434	12094	29.9	7D	-F	3	V		.50				F
744 UPIC	31	1305	1338	1314E	S08	W26	.482	12094	29.6	33	-F		P	1314	.21				I 7
GRP46747	31	1448	1457	1449	S07	W28	.583	12094	29.5	9	--F				.56				2 2 1 6
RAHY	31	1447	1458	1449U	S07	W28	.583	12094	29.5	11	-F	1	C		.56				DE
HUAN	31	1449	1456	1449	S07	W27	.489	12094	29.6	7	-F	1	C						
GRP46748	31	1551	1608	1553	S13	W32	.592	12094	29.3	17	-N				.84				3 3 3 3
CANR	31	1551	1608		S11	W32	.588	12094	29.3	17	-N	2	V	1554	1.60	1.90			
RAHY	31	1551	1607	1553	S14	W32	.598	12094	29.3	16	-N	2	C		.65				DE H
HUAN	31	1555E	1557D		S13	W32	.592	12094	29.3	2D	-F	1	P	1555	.26	.32			E
749 HUAN	31	1941	1955		N05	E80	.889	12096	31.8	14	--N	1	C	1944	.38	.38			E 2
GRP46758	31	2003	2015	2005	S09	W24	.461	12094	30.0	12	--F				.52				2 2 1 2
PALE	31	2002	2013	2005	S10	W24	.469	12094	30.0	11	-N	2	V		.52				F
HUAN	31	2003	2017D		S08	W24	.454	12094	30.0	14D	-F	1	C						D
751 PALE	31	2038	2105	2043	S10	W24	.469	12094	30.1	35	-N	2	V		1.03				F 1

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
752 PALE	31	2207E	2227	2209U	S08	E07	.247	12101	1.4	28D	--N	2	V		.52				F 1
753 PALE	31	2244	2255	2248	S08	W31	.550	12094	29.6	11	--F	2	V		.67				F 2
GRP46754	31	2329	2358	2333	S13	W28	.543	12094	29.9	29	-N				1.85				3 3 3 4
PALE	31	2329E	2344D	2332U	S12	W27	.523	12094	30.0	15D	-N	2	V		.77				DE
MANI	31	2330E	2355	2333	S13	W27	.530	12094	30.0	25D	-N	1		2333	1.83	1.21			
MITK	31	2339E	0000		S15	W29	.570	12094	29.8	21D	-N		C	2339	1.34	1.60			E

"Remarks":

A = Eruptive prominence, base at >90°.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No spots visible in the neighborhood.
H = Flare with high velocity dark surge.
I = Very extensive active region.
J = Plage with flare shows marked intensity variations.
K = Several intensity maxima.
L = Filaments show effects of sudden activation.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H or K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line.
S = Brightening follows disappearance of filament (same position).
T = Region active all day.
U = Close and somewhat parallel bright filaments (‖ or Y shape).
V = Occurrence of an explosive phase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα emission.
Y = Onset of a system of loop-type prominences.
Z = Major sunspot umbra covered by flare.

Note:
A line of explanation has been added before each flare event having more than one maxima. The total number of stations reporting some part of the event is given. The number of stations observing at the time of the principal maximum but not reporting the event is given in the second statement. Care should be exercised in utilizing the numbers in the remarks column. The first number is the number of stations reporting the individual maximum, and not the total number of stations reporting some part of the flare event. The last number is the number of stations reporting at the time of the individual maximum and not necessarily the total number of stations observing during the flare event. GRP numbers may appear several times in order to indicate secondary maxima. An asterisk beside an importance indicates a secondary maximum. The word "GRP" has also been omitted to aid in pointing to this condition.
When it is impossible to determine the time of Maximum Phase from the individual reports the time of Area Measurements is used. This time appears in parentheses. For Flares reported by only one station the last 3 digits of the group number appear to the left of the station code.

In the importance column "--" signifies the subflare has been confirmed by the NOAA grouping program but is not included in the I.A.U. Quarterly Bulletin on Solar Activity. These subflares are also not included in the Flare Index below.

DAILY FLARE INDICES

Date	Flare Index	HR OBS	Date	Flare Index	HR OBS	Date	Flare Index	HR OBS
721001	117.40	22.8	721017	82.35	24.0	721023	10.83	23.4
721002	9.91	23.5	721014	66.28	21.9	721024	20.59	23.9
721003	47.28	24.0	721015	4.92	24.0	721025	139.56	24.0
721004	6.18	18.7	721016	2.89	24.0	721026	314.72	22.4
721005	0.00	23.2	721017	3.84	22.8	721027	84.26	21.4
721006	0.00	22.5	721018	0.00	23.0	721028	53.18	20.9
721007	156.76	24.0	721019	8.17	23.9	721029	56.17	23.9
721008	2.51	23.5	721020	1.91	23.4	721030	167.96	21.9
721011	39.24	19.3	721021	13.76	23.7	721031	87.67	24.0
721012	0.00	22.7	721022	0.00	23.6			

When no Flare Index is given, it is 0 for that day.

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION — MIN.	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
349 HANI	01	0431	0437	0433	S08	W72	.958	12044	25.8	6	-N	2		0433	.52	1.14			6
353 ATHN	01	0943	0953	0945	N18	E05	.993	12061	7.8	10	-F	1		0945	.17	.41			6
356 CANR	01	1106	1140		N12	E20	.349	12056	3.0	34	-B	3	V	1107	.40	.40			5
364 ATHN	02	0905E	0917	0907	N11	E09	.172	12056	3.1	12D	-N	3	V		.83				F 9
365 TEHR	02	1010E	1045	1019	N12	E20	.349	12056	3.9	35D	-F	4	V		.66				F 6
366 TEHR	02	1055E	1113	1055	S10	W73	.964	12044	27.0	18D	-N	3	V		.83				F 5
GRP46367	02	1331	1340	1336	N19	E46	.724	12057	6.0	9	-F				.41				2 2 1 7
WEND	02	1328	1348		N19	E45	.712	12057	5.9	12	-N								
HUAN	02	1334	1340	1336	N18	E46	.722	12057	6.0	6	-F	1	C	1336	.41	.60			E
368 HUAN	02	1402	1403	1403	S08	W90	1.000	12044	25.8	1	-F	2	C	1403	.15				D 8
372 HANI	02	2344E	2358	2344	N10	W02	.067	12056	2.8	6D	-N	2		2344	.41	.41			3
374 TEHR	03	0516	0525	0520	N09	W01	.045	12056	3.1	9	-N				.89				DEH 5
375 TEHR	03	0556	0605	0559	N20	E33	.569	12057	5.7	9	-N				.37				DE 4
377 ATHN	03	0912	0925	0919	N13	W05	.140	12056	3.0	13	-F	1		0919	.52	.58			9
378 CATA	03	1115	1115D	1115	S11	E30	.569	12058	5.7		-N	3		1115	.29	.35		(182)	4
382 CRON	04	0105E	0117	0105U	S08	E42	.699	12059	7.2	12D	-F	3	V	0105	.78				5
384 TEHR	04	0449E	0506	0452	S22	E50	.636	12060	8.0	17D	-N				1.16				DE 3
385 ATHN	04	0709E	0715	0709	N18	E23	.425	12057	6.0	6D	-F	1		0709	.52	.58			5
GRP46386	04	1242	1301	1245	S25	E44	.681	12060	7.8	19	-F				.64				2 2 2 8
ATHN	04	1242E	1252	1245	S24	E40	.761	12060	7.5	10D	-F	1		1245	.68	.90			
ARCE	04	1245E	1318D		S25	E47	.625	12060	8.1	25D	-F		C	1245	.60	1.08			
387 ARCE	04	1345E	1408D		S05	E36	.612	12059	7.3	15D	-F		C	1355	.60	.78			7
389 HONT	05	0758	0805	0801	S04	E05	.202	12058	5.7	7	-N		C	0801	.21				H 8
390 HONT	05	0812	0814	0813	S04	E05	.202	12058	5.7	2	-N		C	0813	.21				8
391 HONT	05	0847	0858	0851	S09	W63	.904	12049	30.6	11	-N		C	0851	.41				9
392 TEHR	06	0548E	0603	0553	S22	E21	.575	12060	7.8	15D	-F	4	V		.17				DE H 5
393 HONT	06	0744	0755	0758	S24	E16	.563	12060	7.5	11	-F		C	0758	.41				12
394 ATHN	06	1353	1409	1355	S14	W48	.786	12062	3.0	16	-F	3	C		.58				DE 7
397 RAMY	07	1218	1238	1228	S10	W34	.611	12058	5.0	12	-F	3	C		.37				DE 6
399 HANI	08	0408	0417	0411	S06	W18	.371	12059	6.8	9	-F	2		0411	.31	.33			7
401 TEHR	08	0756E	0801	0757U	N18	E02	.205	12071	8.5	5D	-N	3	V		.33				DE 9
402 TEHR	08	0920E	0934	0920D	N15	E02	.154	12071	8.5	14D	-N	3	V		.33				F 9
403 CANR	08	0952	0953D		S06	W72	.956	12062	3.0	1D	-N	3	V	0953	.40	.40			9
GRP46404	08	0952	1004	0953	S06	W25	.467	12059	6.5	12	-F				.42				2 2 2 10
ATHN	08	0952E	0956D	0952D	S06	W26	.481	12059	6.5	4D	-F	1	C		.33				DE
TEHR	08	0953E	1004	0954	S05	W23	.432	12059	6.7	11D	-N	3	V		.58				F
GRP46405	08	1308	1337	1317	S15	W73	.968	12062	3.1	29	-N				.37				2 2 1 7
RAMY	08	1301	1328D	1316	S14	W72	.963	12062	3.1	27D	-N	2	C		.37				DE
RAMY	08	1301	1328D	1305	S14	W72	.963	12062	3.1	27D	-F	2	C		.28				DE
ONDR	08	1314	1337	1318	S15	W74	.972	12062	3.0	23	1N		V	1318			3.40		CDEJ
406 HCHA	08	1458	1512	1502	S05	W25	.468	12059	6.7	14	-F		C	1502	.41	.58			E 7
407 HCHA	08	1508	1535D	1513	S15	W74	.972	12062	3.1	27D	-F		C	1513	.21	1.08			D 6
408 TEHR	09	0548E	0608	0548U	S17	W88	.991	12062	3.2	28D	-N	2	V		1.64				F 6
409 HONT	09	0745E	0848	0806	S16	W85	.999	12062	2.9	63D	1N		C	0806	1.55				8

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION — MIN.	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
					APPROX.		CENTRAL	NOAA PLAGE	CMP										
	DATE 1972 OCT	START	END	MAX. PHASE	LAT.	MER. DIST.	DISTANCE	REGION	DAY			COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Mc	MAX. INT. %	
A10 RAMY	09	1458	1518	1502	S08	W49	.776	12058	5.9	20	-F	3	C		.46				DE 6
A11 RAMY	09	1631	1658	1635	N17	W65	.901	12067	4.8	27	-F	2	C		.46				DE 4
A12 MANI	09	2389E	2319	2812	S15	W75	.975	12062	4.3	100	-N	2		2312	.41	1.02			3
A13 ATHN	10	1038	1047	1039	N24	W80	.979	12067	4.4	9	-F	2	C		.33				DE 6
A19 MANI	11	0251	0319	0309	N09	W61	.878	12073	6.5	28	-F	2		0309	.52	.98			7
A20 SIBE	11	0308	0343	0326	N12	W76	.966	12057	5.4	35	1F		C	0326				55	D 6
GRP46421	11	0411	0429	0415	N07	E45	.703	12072	14.5	18	-F				.54				2 2 2 6
TEHR	11	0411	0421	0415	N05	E45	.705	12072	14.5	10	-N	3	V		.66				DE
MANI	11	0415E	0437	0415	N09	E44	.691	12072	14.5	220	-F	2		0415	.41	.57			
A22 MANI	11	0505	0535	0510	N18	W61	.878	12073	6.6	30	-F	2		0510	.31	.57			6
A24 WEND	11	0758E	0824D		S07	W61	.885	12059	6.8	260	1N		V		3.89				6
GRP46426	11	1030	1055	1035	N10	W68	.923	12073	6.3	25	-N				.60				2 1 1 8
CANR	11	1030	1055	1035	N10	W68	.923	12073	6.3	25	-N	2	V		.60	1.30			
TEHR	11	1044E	1104	1050	N09	W68	.861	12073	6.9	280	-N	3	V		.50				DE
A28 HUAN	11	1125E	1134		S07	W59	.869	12059	7.1	90	-F	1	P	1130	.15	.31			D 8
A29 HUAN	11	1204	1228		S07	W59	.869	12059	7.1	24	-F	1	C	1209	.21	.42			D 7
A30 HUAN	11	1421	1433		S07	W60	.877	12059	7.1	12	-F	1	C						5
A31 HUAN	11	1458	1508		S07	W61	.885	12059	7.0	10	-F	1	C	1501	.15	.34			D 6
A32 RAMY	11	1532E	1546	1532D	S07	W60	.877	12059	7.1	140	-F	3	C		.56				DE 6
A34 PALE	11	2218E	2239D	2228U	N05	W67	.918	12073	6.9	210	-N	2	V		.77				DE 3
A36 MANI	12	0046	0058	0047	S07	W68	.934	12059	6.9	12	-N	2		0047	.41	.86			4
A37 MANI	12	0207	0225	0210	N10	W78	.975	12057	6.2	18	-F	2		0210	.31	.77			5
A38 MANI	12	0218	0242	0224	N10	W80	.982	12057	6.1	24	-F	2		0224	.31	.86			5
A40 ATHN	12	1045	1109	1048	N09	W79	.979	12073	6.5	24	-F	2	C		.83				DE 4
A41 RAMY	12	1339	1354	1340U	N10	E46	.715	12074	16.0	15	-F	2	C		.46				DE 5
A42 CRON	13	0308E	0329		N12	E26	.444	12072	15.1	210	-N	3	V		1.30				6
A44 TEHR	13	0747	0759	0749	S05	E42	.687	12082	16.5	12	-N	4	V		.17				DE 5
A45 ABST	13	0830	0905D	0858	S02	W89	1.000	12059	6.7	350	1N		P	0858	1.35				AE 9
A48 CULG	14	0356	0420	0410	N06	E15	.257	12072	15.3	24	1N		C	0410	2.86	2.10			6
A49 ABST	14	0907E	0908D	0907	S12	E89	1.000	12079	21.1	10	1N		P	0907	1.35				AD 8
A50 CATA	14	1045E	1058	1045	N11	E22	.380	12074	16.1	50	-N	2		1045	.29	.31		(150)	7
A51 HUAN	14	1729E	1735		S18	E90	1.000	12079	21.5	60	-F	1	P	1730	.15				D 3
A52 ABST	15	0750E	0844D	0750	S10	E89	1.000	12086	22.0	540	1N		P	0750	1.62				AE 8
GRP46453	15	0910	1008	0938	S17	E84	.998	12086	21.7	58	-N				.66				2 2 2 7
ARCE	15	0910E	1018D		S20	E88	1.000	12086	22.0	68D	-N		C	0950	.66				
TEHR	15	0938E	1005	0938U	S14	E88	.998	12086	21.4	270	-N	4	V		.66				F
A55 HCMA	15	1235	1244	1237	S15	E90	1.000	12086	22.3	9	-N		C	1237					D 7
A58 HUAN	15	1911E	1911D		S15	E90	1.000	12086	22.5		-F	1	P	1911	.26				5
A61 TEHR	16	0420	0432	0423	N04	W38	.614	12072	13.3	12	-F	4	V		.25				DE 5
A62 SIBE	16	0458E	0525D	0454	N20	W70	.935	12080	11.0	350	2F		C	0454	2.56	8.20		51	CJUZ 5
A64 ARCE	16	0958E	1008D		S11	E76	.976	12086	22.1	100	-N		P	1000	.15				7
A65 HUAN	16	1149	1208		S14	E83	.996	12086	22.7	11	-F	1	C	1156	.21				D 7
A66 HUAN	16	1226	1238	1227	S14	E82	.994	12086	22.7	4	-F	2	C	1227	.21				D 7

SOLAR FLARES
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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH °	MAX. INT. %	
467 ARCE	16	1245E	1300D		S08	E68	.935	12079	21.6	15D	-N		C	1300	.51				6
468 ARCE	16	1400E	1400D		S15	E78	.953	12086	21.8		-F		P	1400	.22				6
GRP46472	17	0819	0826	0822	S16	E62	.915	12086	22.8	7	-F				.54				2 2 2 8
ABST	17	0818E	0827	0822	S16	E64	.927	12086	22.1	9D	1F		P	0822	.90	2.16		64	D
TEHR	17	0819	0825	0822	S16	E60	.901	12086	21.8	6	-F	4	V		.17				DE
473 ATHN	17	1035E	1043	1038	S18	E79	.987	12086	23.4	8D	-F	1	C		.33				DE 8
474 ATHN	17	1158	1203D	1202	S17	E61	.910	12086	22.1	5D	-F	1	C		.66				F 7
475 ARCE	17	1320E	1349D		S04	E52	.803	12079	21.5	29D	-F		P	1349	.28	.58				8
479 ARCE	18	0955E	1000D		S07	E40	.668	12079	21.4	5D	-N		P	1000	.66	.98				6
480 MONT	18	1020E	1030	1020	S10	E40	.680	12079	21.4	10D	-F		C	1020	.21					5
481 MONT	18	1125	1133	1125	S07	E39	.655	12079	21.4	8	-N		C	1125	.21					4
482 MONT	18	1125	1134	1128	S11	E48	.773	12086	22.1	9	-N		C	1128	.21					4
483 MONT	18	1150	1155	1151	S15	E43	.736	12086	21.7	5	-N		C	1151	.41					5
484 MONT	18	1212	1223	1215	S17	E48	.794	12086	22.1	11	-N		C	1215	.72					4
485 ARCE	18	1230E	1238D		S16	E88	1.000	12089	25.1		-N		P	1230	.89					5
486 ARCE	18	1400E	1400D		S16	E87	1.000	12089	25.1		-N		P	1400	.25					4
496 MONT	19	1037	1043	1038	S17	E36	.671	12086	22.1	6	-F		C	1038	.21					8
497 MONT	19	1038	1047	1039	S07	E27	.496	12079	21.5	9	-N		C	1039	.72					8
499 MONT	19	1140E	1155	1153	S07	E26	.482	12079	21.4	15D	-N		C	1153	.52					6
GRP46502	19	1358	1400	1358	S07	E24	.455	12079	21.4	10	-F				.42				2 2 2 9
CATA	19	1358E	1400	1358	S08	E23	.449	12079	21.3	10D	-N	3		1358	.58	.64		(174)	
ARCE	19	1355E	1400D		S05	E25	.456	12079	21.5	5D	-F		C	1355	.25	.30			
503 MCMA	19	1352	1406	1353	S13	E32	.599	12086	22.8	14	-F		C	1353	.26	.30			D 9
GRP46504	19	1459	1528	1507	S13	E32	.599	12086	22.8	21	-N				.28				2 2 2 7
MCMA	19	1459	1528	1504	S13	E32	.599	12086	22.8	21	-N		C	1504	.26	.38			D
CATA	19	1500E	1515D	1510	S13	E31	.587	12086	22.8	15D	-N	2		1510	.29	.35		(166)	
505 RAMY	19	1557E	1610	1557U	S07	E25	.469	12079	21.5	21D	-F	2	C		.56				DE 6
510 MANI	20	0137	0152	0148	S07	E17	.360	12079	21.3	15	-F	2		0148	.62	.67			5
511 TEHR	20	0506E	0521	0510	S14	E65	.923	12089	25.1	15D	-N	4	V		.66				F 5
512 TEHR	20	0625E	0641	0632	S13	E62	.901	12089	24.9	16D	1N	4	V		1.32				F 3
514 TEHR	20	0744	0753	0746	S10	E66	.924	12089	25.3	9	-N	3	V		.33				F 6
520 CATA	21	1058	1105D	1058	S17	E44	.754	12089	24.8	15D	-N	3		1058	.29	.44		(174)	3
521 CATA	21	1345E	1400D	1350	S12	E06	.316	12086	22.8	15D	-N	3		1350	.58	.61		(158)	3
522 HUAN	21	1421	1428	1424	S17	E07	1.000	12090	26.1	7	-F	1	C	1424					5
529 BOUL	22	1725E	1735D	1727	S11	W04	.289	12086	22.4	10D	-F	3	V						3
531 PALE	22	2005E	2016	2006U	S08	E30	.541	12089	25.1	11D	-F	3	V		.52				DE 3
533 MANI	23	0246E	0253	0248	S14	E65	.922	12090	28.8	7D	-F	1		0248	.41	.84			5
535 TEHR	23	0410	0429	0422	S12	E58	.868	12090	27.5	11	-F	3	V		.19				DE 4
536 TEHR	23	0503E	0524	0503U	S14	E19	.453	12089	24.6	21D	-N	3	V		.41				F 5
537 TEHR	23	0613	0631	0618	S13	W10	.355	12086	22.5	18	-N	3	V		.74				F 5
541 CANR	23	1018E	1035	1018U	S25	W15	.553	12086	22.3	25D	-N	3	V	1018	1.80	1.88			4
542 ARCE	23	1205E	1218		S13	W13	.380	12086	22.5	5D	-N		C	1205	.19	.28			6
543 ARCE	23	1220	1223	1221	S09	W13	.338	12085	22.5	3	-F		C	1221	.15	.28			6

SOLAR FLARES
Unconfirmed

OCTOBER 1972

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1972 OCT	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH °	MAX. INT. %	
544 CANR	23	1229E	1235	1229U	S14	W14	.483	12086	22.5	6D		-N	3 V	1229	.60	.60			5
545 ATHN	23	1242E	1251	1243	S19	E15	.476	12089	24.7	9D		-F	3 V		.66				DE 5
547 HUAN	23	1335	1340D	1337	S19	E16	.484	12089	24.8	5D		-N	1 P	1337	.36	.42			E 4
557 MITK	24	0256E	0258D		S14	E82	.994	12094	30.3	2D		1N	P	0258	1.83				E 3
558 MANI	24	0324E	0331	0324	S10	E72	.958	12094	29.5	7D		-N	1	0324	.52	1.18			3
561 ATHN	24	0613E	0626	0615	S13	E42	.713	12090	27.4	13D		-F	2 V		.33				DE 4
563 ABST	24	0755	0806	0757	S14	E79	.987	12094	30.3	11		1F	C	0757	1.80			83	DZ 7
577 PALE	24	1738E	1752D	1739	S11	E31	.571	12090	27.1	14D		-F	2 V		.52				3
578 PALE	24	1751E	1800	1756	S11	E70	.948	12094	30.0	9D		-N	2 V		.48				3
586 HUAN	24	2104	2106	2104	S13	E65	.921	12094	29.8	2		-F	1 C	2104					4
592 MITK	25	0808E	0803D		S13	E65	.921	12094	29.9	3D		1N	P	0802	2.17				E 7
595 MANI	25	0834	0838	0835	S08	W33	.580	12085	22.5	4		-F	1	0835	.41	.51			7
GRP46596	25	0108	0115	(0109)	S14	E65	.922	12094	29.9	7		-F			1.03				2 2 2 6
PALE	25	0105E	0113	0106	S15	E64	.917	12094	29.8	8D		-F	2 V		.31				F
MITK	25	0111	0116D		S13	E65	.921	12094	29.9	5D		1F	P	0111	1.75				E
GRP46597	25	0127	0141	0132	S13	E64	.914	12094	29.9	14		-N			.44				2 2 2 5
PALE	25	0127	0137	0130	S14	E64	.916	12094	29.9	10		-N	2 V		.26				F
MANI	25	0130E	0144	0133	S12	E63	.906	12094	29.8	14D		-N	2	0133	.62	1.24			
GRP46600	25	0243	0415	0255	S15	W34	.632	12086	22.6	92		-N			2.54				2 2 2 8
CULG	25	0243	0415	0255	S15	W38	.586	12086	22.9	92		1N	C	0255	3.92	4.88			Z
CRON	25	0252E	0310	0254	S14	W38	.672	12086	22.3	18D		-N	3 V	0310	1.15				
601 MANI	25	0313E	0328	0313	S15	E36	.655	12090	27.8	15D		-N	2	0313	.41	.54			8
602 MANI	25	0315	0326	0318	S12	E61	.891	12094	29.7	11		-N	2	0318	.41	.79			8
604 MANI	25	0409E	0423	0412	S12	E60	.883	12094	29.7	14D		-N	2	0412	.52	.97			4
605 MANI	25	0409E	0423	0423	S12	E60	.883	12094	29.7	14D		-N		0423	.41	.48			4
609 TEHR	25	0951	0957	0953	S13	E25	.511	12090	27.3	6		-N	4 V		.33				F 4
613 CAPS	25	1204E	1204D		S13	E55	.844	12094	29.6			-B	1 S						B 4
617 HUAN	25	1736	1748D		S08	E54	.823	12094	29.8	4D		-F	1 P	1738	.15	.26			D 5
623 PALE	25	2302	2308	2303	S10	E51	.799	12094	29.8	6		-N	1 V		.52				F 4
627 ATHN	26	0031	0038D	0032	S13	E64	.914	12094	30.0	7D		-N	3 V		.62				7
630 TEHR	26	0524	0529	0526	S12	E42	.706	12094	29.4	5		-N	4 V		.88				DE 3
634 HUAN	26	1128	1133	1131U	S08	E43	.705	12094	29.7	5		-F	2 C	1131	.31	.43			7
635 HUAN	26	1153	1155	1153	S17	E48	.791	12094	30.1	2		-F	2 C	1153	.15	.25			D 5
636 MCMA	26	1247	1253	1248	S13	E45	.745	12094	29.9	6		-N	C	1248	.52	.78			E 4
639 HUAN	26	1438	1449	1444U	S13	E42	.712	12094	29.8	11		-F	2 C	1444	.31	.43			ET 5
640 HUAN	26	1458	1505	1501	S15	E42	.721	12094	29.8	7		-F	1 C	1501	.21	.29			D 5
641 HUAN	26	1635	1643	1639	S13	E42	.712	12094	29.8	8		-N	1 C	1639	.26	.36			4
644 HUAN	26	2101	2109		S08	E38	.644	12094	29.7	8		-F	1 C	2107	.21	.27			4
650 ATHN	27	0837	0919	0840	S13	E33	.607	12094	29.8	42		-N	3 C		.58				F H 5
653 RAHY	27	1132	1208	1134	S14	E32	.681	12094	29.9	36		-F	3 C		.46				F 5
655 RAHY	27	1330	1356	1332	S16	W38	.682	12089	24.7	26		-F	3 V		.37				DE 3
665 MANI	28	0149E	0152	0149	S16	E28	.480	12094	29.6	3D		-N	2	0149	1.24	1.48			2
668 TEHR	28	0405E	0426	0405U	S16	W80	.990	12086	22.2	21D		-F			1.32				DE 4

SOLAR FLARES
Unconfirmed

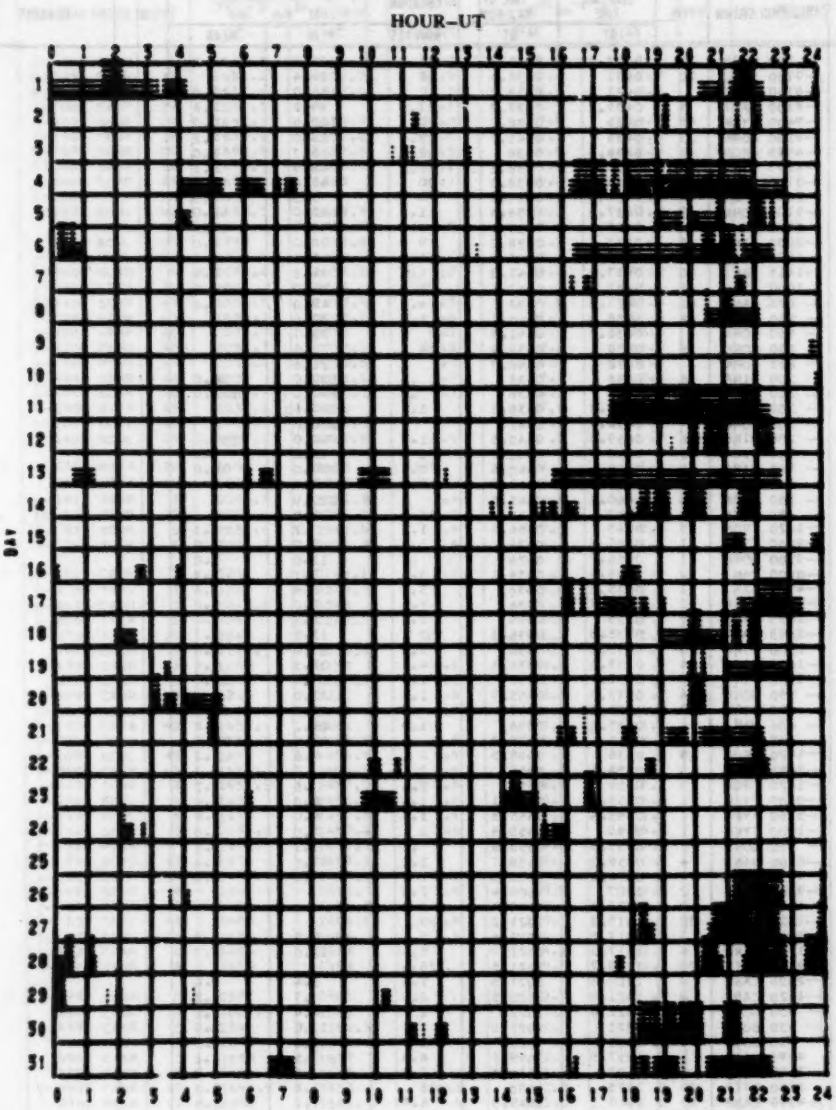
OCTOBER 1972

OBSERVATORY	DATE 1972 OCT	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION CENTRAL DISTANCE	LOCATION MCMATH PLAGE REGION	LOCATION CMP DAY	DURATION MIN.	IMPORTANCE	OBS. CONF.	OBS. TYPE	MEASUREMENTS TIME UT	MEASUREMENTS MEAS. AREA Sq. Deg.	MEASUREMENTS CORR. AREA Sq. Deg.	MEASUREMENTS MAX. WIDTH Deg	MEASUREMENTS MAX. INT. %	REMARKS
670 TEHR	28	0557	0611	0605	S13	E23	.484	12094	30.0	14	-N				.66				DE 3
671 TEHR	28	0614	0639	0617	S13	E23	.484	12094	30.0	25	-N				.50				F 4
673 ATHN	28	0855E	0916	0855U	S17	W81	.992	12086	22.3	21D	-F	2	V		.66				DE 7
GRP46676	28	1158	1206	(1206)	S11	E20	.429	12094	30.0	8	1N				5.25				1 1 1 5
UPIC	28	1158E	1206D		S16	E21	.491	12094	30.1	8D	1N		P	1206	3.36				TI
UPIC	28	1158	1206D		S12	E17	.484	12094	29.8	8D	-F		P	1206	.21				TI
UPIC	28	1158E	1206D		S09	E21	.424	12094	30.1	8D	-F		P	1206	1.68				TI
678 UPIC	28	1327	1337		S11	W98	1.000	12079	21.8	10	-N		P	1329					6
679 UPIC	28	1333E	1337	1333	N01	E38	.617	12096	31.4	4D	-F		P	1333	.42				TI 4
680 CATA	28	1425E	1425D	1425	S17	W16	.453	12090	27.4		-B	3		1425	.56	.64		(219)	4
686 HUAN	28	1755	1838U		S17	E16	.453	12094	29.9	340	-F	1	P	1803	.26	.29			4
694 TEHR	29	0448	0455D	0443	S13	E02	.386	12094	29.3	150	-N	3	V		.33				DE 3
695 MANI	29	0511E	0530	0511	S11	E01	.271	12094	29.3	190	-N	2		0511	.52	.54			3
697 TEHR	29	0707E	0724	0712	S10	E04	.263	12094	29.6	170	-N				.99				FN 3
698 ISTA	29	0738E	0743		S10	E04	.263	12094	29.6	130	-F								DB 5
702 TEHR	29	1225	1235	1227	S14	W06	.336	12094	29.1	10	-N	3	V		.89				DE 3
704 RAHY	29	1415	1432	1419	S09	W03	.242	12094	29.4	17	-F	3	C		.37				DE 4
708 MANI	29	2249E	2249	2249	S08	W05	.236	12094	29.6		-N	2		2249	1.86	1.91			3
2 STATIONS REPORTING GROUP 46716. 5 STATIONS OBSERVING AND NOT REPORTING.																			
GRP46716	30	0922	0939	0925	S14	W11	.368	12094	29.6	17	-N				.63				2 2 1 9
UPIC	30	0914	0941	0925	S10	W15	.357	12094	29.8	27	-F		P	0925	1.05				TIE
UPIC	30	0928	0930D	0925	S13	W13	.372	12094	29.4	10D	-N		P	0925	.63				TIE
WEND	30	0924	0937		S15	W11	.382	12094	29.6	13	-N								
UPIC	30	0930	0951	0938U	S16	W07	.378	12094	29.9	21	-N		P	0938	.63				TID
719 UPIC	30	1100	1114	1103	S12	W13	.359	12094	29.5	14	-N		P	1103	.85				TI 5
719 UPIC	30	1109	1152	1114	S14	W87	.348	12094	29.9	43	*1N		P	1114	2.31				TIK 5
GRP46723	30	1408	1422	1411	S13	W47	.765	12090	27.1	14	-N				.48				2 2 1 7
CANR	30	1408	1420	1411	S07	W48	.758	12090	27.0	12	-N	3	V	1411	.48	.66			
WEND	30	1412	1423		S18	W45	.764	12090	27.2	11	-N								
728 HUAN	30	2015	2031	2017U	S13	W20	.447	12094	29.3	16	-N	1	C	2017					1
2 STATIONS REPORTING GROUP 46732. 3 STATIONS OBSERVING AND NOT REPORTING.																			
732 MANI	31	0315E	0325	0315	S08	W20	.399	12094	29.6	10D	-N	2		0315	.62	.67			4
732 TEHR	31	0321E	0329	0321U	S18	W07	.399	12094	30.6	8D	*-N	3	V		.66				F 5
734 CRON	31	0448	0525	0508	N16	E22	.414	12098	1.8	37	-N	2	C	0508	1.51	1.67			4
736 CAPS	31	0727	0732		S09	W21	.421	12094	29.7	5	-F	3	V	0730	.80	.96		(158)	4
737 MONT	31	0808	0844	0812	S14	W21	.467	12094	29.8	36	-N		C	0812	2.86				6
738 MONT	31	1028	1046	1035	S15	W22	.489	12094	29.8	18	-N		C	1035	.72				7
739 MONT	31	1112	1132	1116	S15	W22	.489	12094	29.8	20	-N		C	1116	.72				8
740 MONT	31	1117	1139	1124	S11	W29	.541	12094	29.3	22	-N		C	1124	.52				9
742 UPIC	31	1227	1244		N04	E04	.078	12096	31.8	17	-F		P	1233	.63				18
GRP46743	31	1238	1251	1241	S16	W21	.488	12094	29.9	21	-F				.48				2 2 2 9
UPIC	31	1228	1248	1248	S16	W22	.498	12094	29.9	28	-F		P	1240	.63				I
TEHR	31	1239	1253	1241	S16	W20	.477	12094	30.0	14	-N	3	V		.17				F
745 UPIC	31	1358	1415	1357U	S07	W27	.489	12094	29.6	25	-F		P	1357	.42				I 8
746 UPIC	31	1405	1415		S11	W31	.567	12094	29.3	10	-F		P	1414	.63				I 7

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

OCTOBER 1972



Observatories included in total patrol:

Abastumani	Capri-S (Sweden)	Huancayo	Manila	Ramey
Arcetri	Carnarvon	Istanboul	McMath-Hulbert	Siberie
Athenes	Catania	Kharkov	Meudon	Tachkent
Boulder	Culgoora	Kiev	Mitaka	Teheran
Bucharest	Gran Canaria	Kodaikanal	Monte Mario	Upice
Capri-F (German)	Herstmonceux	Locarno	Ondrejov	Voroshilov
			Palehua	Wendelstein

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1972

OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
1	100	HIRA	6	0013.8	0013.8	1.3	90.0	20.0		
	9750	IRKU	20	0421	0436.4	38	29.4			
	9750	IRKU		0421	0438.3		154.0	13.8		
	8800	MANI	4	0435.7	0438.3	11.9	89.0	11.8		
	9400	TYKW	45	0436	0438.2	20	100.0	10.0		
	9100	GORK	23	0436	0441.7	13.4	28.0	7.2		
	4995	CRON	45	0436.5	0438	12.5	5.7	1.0		
	4995	MANI	4	0436.2	0438.2	11.8	49.9	8.1		
	3750	TYKW	45	0436	0438.1	20	45.0	4.0		
	2695	CRON	45	0436.5	0437.5	9	3.5	1.3		
	9100	GORK	3	0437.8	0438.5	1.2	85.0	42.0		
	2695	MANI	40	0437.5	0438.3	5.4	41.9	10.8		
	2000	TYKW	45	0437	0438.2	9	28.0	5.0		
	1420	CRON	45	0437.5	0441.5	4.5	3.5	1.1		
	1415	MANI	40	0437.5	0441.2	4.5	34.8	7.5		
	1000	TYKW	45	0437	0441.1	5	85.0	14.0		
	606	MANI	40	0437.5	0438	4.5	48.0	7.8		
	950	GORK	46	0438.3	0440.1	3.8	32.0			
	950	GORK		0438.3	0441.5		33.0			
	650	GORK	46	0438	0438.4	4	77.0			
	650	GORK		0438	0440.7		21.0			
	500	HIRA	6	0438	0438	.5	130.0	30.0		
	200	HIRA	6	0438	0438	.3	240.0	120.0		
	200	GORK	41	0438.3	0438.5	3.5	200.0D			
	200	GORK		0438.3	0441		650.0			
	200	HIRA	6	0439.5	0440.5	1.8	960.0	230.0		
	500	HIRA	6	0440	0440.7	1	45.0	5.0		
	100	HIRA	6	0440	0440.6	3.5	100.0	30.0		
	100	GORK	41	0440.3	0441.5	3.3	40.0			
	100	GORK		0440.3	0442.5		220.0			
	650	GORK	29	0442	0442	15	3.0			
	1420	CRON	3	0445	0456.5	1.5	.2	.1		
	9400	TYKW	1	0535.8	0536	1	8.0	2.0		
	9100	GORK	1	0535.7	0536	.7	11.0	5.0		
	8800	MANI	2	0535.5	0536.1	3.5	7.1	2.4		
	4995	MANI	2	0535.5	0536	3.5	6.4	1.6		
	3750	TYKW	1	0535.8	0536	1.5	7.0	3.0		
	2695	CRON	45	0535	0536	2.5	1.3	.4		
	2695	MANI	4	0535.5	0536.1	3	13.5	2.7		
	2000	TYKW	3	0535.8	0536	1.5	31.0	8.0		
	1415	MANI	4	0535.6	0536.1	4.4	38.5	9.4		
	1000	TYKW	45	0535.7	0536	1.5	37.0	10.0		
	950	GORK	4	0535.7	0535.9	1.4	22.0			
	650	GORK	3	0535.8	0536	.7	23.0	11.0		
	606	MANI	4	0535.6	0536	1.9	16.2	3.0		
	200	GORK	6	0535	0535.2	.6	40.0	20.0		
	1420	CRON	8	0536	0535.5	2	4.6	1.2		
	2695	CRON	3	0554.5	0555	2	.7	.2		
	1420	CRON	3	0554	0550	2.5	.6	.2		
	9400	TYKW	1	0555.5	0556.1	1.5	6.0	2.0		
	3750	TYKW	1	0555.5	0555.8	1.9	4.0	2.0		
	1000	TYKW	1	0555	0555.8	2	5.0	2.0		
	950	GORK	1	0555.6	0555.8	.6	3.1	1.5		
	8800	MANI	4	0658.2	0658.7	1.2	47.0	9.4		
	4995	MANI	1	0658.2	0658.6	1	4.8	1.6		
	9285	ARCE	2	1007	1008.4	2.5				
	1420	ARCE	2	1007.8	1008.8	2.5				
	1420	ARCE	22	1015.2	1021.2	29				
	3000	BERL	3	1017.5	1021.6	5.1	6.3	1.8		
	1500	BERL	4	1017.2	1021.7	5.8	11.0	1.7		
	9285	ARCE	20	1018.7	1021.5	28.5				
	2695	CANR	8	1020.5	1021.5	1.5	1.4	.6		
	1420	CANR	3	1021.5	1022.5	2.5	.7	.2		
	950	GORK	1	1021.8	1022	1	4.4	2.2		
	930	BORD	5	1021	1021.8	2	11.0	2.0		
	650	GORK	1	1021.5	1022	1	3.0	1.5		
	4995	CANR	3	1057.5	1059.5	4.5	.5	.2		
	2695	CANR	3	1127	1130.5	7.5	.6	.2		
	2800	OTTA	20	1425	1430	35	1.8	0.8		
	4995	CANR	45	1645	1649.5	6.5	7.1	2.6		
	9400	HUAN	45	1646.6	1650.2	5.8	257.0	104.2		
	2700	PENN	45	1646.2	1649.7	6	77.7	30.0		
	15400	SGMR	46	1647.9	1649.5	5.4	242.0	98.0		
	10700	PENN	45	1647.6	1649.8	4.6	280.0	73.7		
	8800	SGMR	46	1647.3	1649.5	5.7	270.0	104.0		
	7000	SAOP	46	1647.3	1650.6	4.8	160.2			
	4995	BOUL	45	1647.5	1650	5.5	10.1	5.1		
	4995	SGMR	46	1647.8	1651.7	4.9	100.0	40.0		
	2800	OTTA	4	1647	1649.7	6	47.0	17.0		
	2695	CANR	45	1647	1649.5	7	6.3	2.2		
	2695	SGMR	46	1647.8	1649.6	4.7	63.0	28.0		
	930	BORD	45	1647	1649.4	5	113.0	3.0		
	35000	SGMR	3	1648.8	1649.5	3.5	158.0	62.0		
	9400	SLOU	4	1648	1649.7	5	234.0			
	960	PENN	45	1648.6	1649.6	10.9	23.1	3.0		
	37000	SLOU	4	1649	1650	1.5	80.0			
	19000	SLOU	4	1649	1649.8	3	174.0			
	1420	CANR	45	1649.5	1651	4.5	2.1	.5		
	1415	SGMR	45	1649	1650	9.1	27.0	11.0		
	606	SGMR	40	1649.3	1650.7	8.6	11.0	4.5		

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OCT 1972	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
	245 SGMR	6	1650.8	1652.9	21.7	48.0	19.0		
	10700 PENN	29	1652.2	1652.2	11.9	25.4	12.7		
	9400 HUAN	29	1652.4	1652.4	36.5	22.8	8.6		
	7000 SAOP	29	1652.1		5.5				
	4995 SGMR	29	1652.7	1652.7	19.8	7.0	3.5		
	2700 PENN	29	1652.2	1652.2	25.6	11.1	5.6		
	2695 SGMR	29	1652.5	1652.5	22.5	4.0	2.0		
	15400 SGMR	29	1653.3	1653.3	13.2	18.6	9.3		
	8800 SGMR	29	1653	1653	16.1	16.8	8.4		
	2800 OTTA	29	1653		20	4.8	2.4		
	2695 BOUL	45	1657.5	1659.5	6	6.1	1.7		
	1420 BOUL	45	1748.5	1750.5	4.5	2.3	1.2		
	1420 BOUL	45	1755	1755.5	3	1.2	.1		
	4995 BOUL	45	2030.5	2038	5	2.1	.6		
	9400 HUAN	4	2035.4	2037.8	9.2	78.0	21.9		
	2800 OTTA	21	2035	2245	200	4.0	2.0		
	15400 SGMR	45	2036.5	2037.9	7.1	58.0	23.4		
	10700 PENN	45	2036.7	2038.1	9.4	82.9	12.6		
	8800 SGMR	46	2036.7	2038	6.1	73.0	20.0		
	2700 PENN	45	2036.7	2038.1	10.8	13.0	3.0		
	960 PENN	45	2036.7	2038.5	7.2	4.5	1.5		
	4995 SGMR	46	2037	2038.1	8.9	17.6	7.5		
	2695 SGMR	46	2037.3	2040.1	9.1	10.3	3.5		
	2800 OTTA	45	2037.2	2038	4	80.0	40.0		
	2695 BOUL	45	2037.5	2038.5	5	.8	.3		
	1420 BOUL	45	2037.5	2039.5	4.5	.5	.2		
2	2800 OTTA	20	1450	1600	190	2.2	1.1		
	2800 OTTA	20	1805	1920	115	2.6	1.3		
	1415 SGMR	1	2051.8	2051.9	.4	.8	.3		
	606 SGMR	3	2051.6	2051.8	.5	11.0	4.0		
	410 SGMR	6	2051.6	2051.8	.6	7.1	2.5		
	245 SGMR	6	2051.3	2051.8	1.6	4.4	1.5		
3	1420 CRON	3	0241	0243.5	5.5	.6	.2		
	3750 TYKW	1	0242	0243.7	3	5.0	2.0		
	2695 CRON	3	0242.5	0243	2	.4	.2		
	2000 TYKW	1	0242	0243.7	3	3.0	1.0		
	3750 TYKW	29	0245		25	2.0	1.0		
	4995 CANR	3	1112.5	1113.5	3	.3	.1		
	4995 CANR	3	1155	1158	4.5	2.5	.1		
	4995 CANR	3	1207	1208.5	2.5	2.7	.2		
	4995 CANR	3	1215	1217	3.5	2.8	.2		
	3000 BERL	4	1455.2	1456	3.8	4.6	1.7		
	2800 OTTA	45	1455.5	1456	3	3.6	1.8		
	2700 PENN		1455.5	1455.9	3.8	8.8	2.0		
	2695 BOUL	45	1455	1456.5	4.5	.7	.2		
	2695 CANR	45	1455	1455.5	2.5	.6	.2		
	2695 SGMR	1	1455.5	1457.2	2.5	4.4	2.2		
	1500 BERL	4	1455	1456.7	3.6	38.0	8.4		
	1420 BOUL	8	1455	1457.5	3.5	4.2	1.2		
	1415 SGMR	3	1455.8	1457.2	3.6	43.5	18.0		
	960 PENN		1455.5	1457.5	3	25.8	7.1		
	930 BORD	45	1455	1457.3	3	81.0	12.0		
	606 SGMR	4	1455.4	1457.5	3.3	59.5	24.0		
	410 SGMR	6	1455	1455.7	3.8	58.9	22.0		
	245 SGMR	6	1455	1455.8	3	89.0	35.0		
	237 TRST	41	1455	1456.8	3.6	120.0			
	225 HARS	45	1455	1456	2.5	70.0	20.0		
	1420 CANR	8	1456	1458	3	4.3	1.1		
	1420 CANR	8	1456	1458	3	4.3	1.1		
5	4995 CANR	3	0937	0941	4	3.1	.4		
	4995 CANR	3	1001.5	1002	1	.7	.3		
	4995 CANR	3	1341	1342.5	2	1.0	.4		
	4995 CANR	3	1605	1606	4	.9	.3		
	4995 CANR	3	1635	1637	3	1.3	.2		
	4995 CANR	8	1644	1645	1	1.6	.4		
	4995 CANR	45	1654.5	1658	4.5	2.0	.6		
	2700 PENN	41	1658	1658.1	.5	115.0			
6	9285 ARCE	1	0848.3	0849.3	2				
	2800 OTTA	20	1705	1900	235	4.4	2.2		
	2700 PENN	20	1826.6	1843.8	78.5	4.4	2.2		
7	1420 CANR	3	0752	0753	2	.2	.1		
	3750 TYKW	20	2210	2255	150	6.0	3.0		
	2695 PENT	20	2210	2250	110 D	9.6			
	2000 TYKW	20	2210	2250	150	9.0	2.0		
	1000 TYKW	45	2215	2250	145	25.0	7.0		
	1415 MANI	1	2223.8	2224.5	1.9	6.7	1.9		
	1420 BOUL	8	2224	2225	1.5	.6	.3		
	606 MANI	1	2224.1	2224.5	1.6	9.9	3.5		
	100 HIRA	45	2233	2250.5	46	120.0	20.0		
	1420 BOUL	45	2234	2236	2.5	.4	.2		
	606 MANI	40	2243.8	2257.3	18.8	29.0	1.2		
	500 HIRA	27	2245	2259.3	21	30.0	10.0		
	1415 MANI	20	2246.6	2250.8	15.8	8.6	1.9		
	200 HIRA	6	2248	2250	15	20.0	5.0		
	100 HIRA	27	2340	2354	46	20.0	7.0		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
8	23	POTS	40	1026	1029	3.5U	6000.0U	300.0U		
	23	POTS	40	1153.7	1153.8	1.8	5000.0U	500.0U		
	4995	CANR	8	1546	1547	2	1.3	.6		
	18	MCMA	42	1940	1949	14			1	
	18	MCMA	6	1957	1959	3			1	
9	550	KIEV	3	0722.3	0723.8	3	51.0			
	2800	OTTA	20	1430	1500	60	2.8	1.4		
	2800	OTTA	24	1550		15	2.0			
10	1420	CANR	45	1114.5	1114.5	1.5	.9	.3		
11	2800	OTTA	20	1620	1700	180	1.8	0.9		
12	2800	OTTA	24	1940		120	5.2			
13	4995	BOUL	3	2323	2323.5	2	.7	.3		
	2695	BOUL	3	2323	2324	2.5	.5	.2		
	1420	BOUL	3	2323.5	2324	1	.2	.1		
	2695	BOUL	3	2344.5	2345	1.5	.5	.2		
14	3750	TYKW	20	0305	0315	40	2.0	1.0		
	1420	CRON	8	0305.5	0306.5	2.5	.7	.2		
	9400	HUAN	20	1340.7	1358.2	41.2	9.5	5.3		
	2700	PENN	8	1403.3	1403.4	.2	31.3			
	9400	HUAN	20	1853.9	1921.6	79.4	15.2	6.9		
	4995	BOUL	3	2147.5	2151.5	5	1.3	.4		
15	237	TRST	43	0810 U	0907.7	90 U	83.0			
	3000	BERL	20	0843.6	1026.6	207	7.5			
	234	POTS	45	0900 U	0914 U	53	30.0	9.0		
	210	IZMI	24	0903	0914.1	41	70.0	30.0		
	221	ABST	3	0906.2	0913.8	29	19.0	9.0		
	113	POTS	45	0907 U	0928 U	101	70.0	18.0		
	9500	BERL	20	0920	1020	260	12.0			
	1500	BERL	20	0924	1020.5	154	3.5			
	2800	OTTA	24	1425		125	5.6			
	2700	PENN	8	1506.9	1507	.2	18.5			
	2800	OTTA	20	1640	1750	140	1.4	0.7		
16	113	POTS	45	1117	1117	.1	200.0	20.0		
	930	BORD	5	1550	1550.6	1	23.0	1.0		
	245	SGMR	6	1605.4	1605.5	.2	2.7	1.0		
	930	BORD	5	1607	1607.4	1	11.0	1.0		
	2700	PENN	8	1903.5	1903.6	.2	20.4			
	2800	OTTA	20	1910	1915	70	1.4	0.7		
	2700	PENN	8	1922.5	1922.6	.2	15.9			
	100	HIRA	5	2213.4	2213.4	.5	75.0	20.0		
	100	HIRA	5	2219.6	2219.7	1	90.0	30.0		
17	650	GORK	22	0709.7	1126	350 D	15.9			
	221	ABST	1	0756.8	0757.2	.4	36.0			
	225	HARS	45	0824.5	0825	1.5	70.0	20.0		
	200	GORK	44	0900		240 D		5.0		
	210	IZMI	42	0916		164	50.0			
	100	GORK	44	0921		219		5.0		
	410	SGMR	44	1104 E	1150.2	649 D	13.3			
	245	SGMR	44	1104 E	1157	649 D	314.0			
	950	GORK	20	0920.2	0941.6	46.2	3.9	1.6		
	225	HARS	45	0920		3	90.0D	50.0		
	2695	CANR	3	0937.5	0938	1.5	.5	.2		
	2950	GORK	1	0938.1	0938.5	.8	16.0	8.0		
	9500	BERL	20	1101	1105.8	8.6	4.3			
	3000	BERL	2	1104.5	1105.7	3	6.4	1.7		
	1500	BERL	1	1105.5	1105.7	.5	1.6	0.4		
	200	GORK	6	1115	1115.9	19	400.0			
	234	POTS	40	1151.2	1151.4	1.8	200.0	1.0		
	245	BOUL	42	1323	1342	34			1	
	930	BORD	40	1427	1427.8	2	13.0	2.0		
	245	BOUL	42	1433	1434	40			1	
	2800	OTTA	20	1520	1600	130	1.6	0.8		
	2800	OTTA	20	1805	2000	215	3.2	1.6		
18	225	HARS	45	1126.5	1127	1	30.0	10.0		
	200	GORK	41	1126.9	1127.4	5.6	150.0			
	200	GORK		1126.9	1129.4		75.0			
	100	GORK	6	1126.9	1127.3	1.3	600.0			
	237	TRST	42	1127.1	1127.5	4.9	210.0			
	237	TRST		1127.1	1131.9		84.0			
	234	POTS	5	1127.5	1127.5	.1	120.0	40.0		
	210	IZMI	41	1127	1127.3	5	135.0			
	113	POTS	40	1127	1127.3	2.2	700.0	55.0		
	23	POTS	45	1127	1127.4	2.2	10000.0	1500.0		
	225	HARS	45	1128.5	1129	1	30.0	10.0		
	225	HARS	45	1131	1131.5	1	30.0	10.0		
	2800	OTTA	24	1405		30	2.0			
	1420	CANR	3	1725.5	1729	6	.3	.1		
	2800	OTTA	1	1932.8	1933	1	1.0	0.5		
	245	BOUL	42	2113	2331	81 D			2	
	245	SGMR	43	2115.3	2137.3	36.7D	44.4			

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
	2695	PENT	1	2149	2150.5	2	1.4	0.7U		
	100	HIRA	6	2227.5	2228.1	2	100.0	40.0		
	208	VORO	24	2243	2251	11	12.0	10.0		
	100	HIRA	6	2321.5	2322.2	2	85.0	30.0		
19	200	HIRA	27	0456	0515	45	70.0	5.0		
	200	GORK	44	0500		45		5.0		
	100	HIRA	43	0500	0518	80	40.0	10.0		
	100	GORK	44	0500		60		10.0		
	500	HIRA	27	0504.5	0516.5	30	40.0	10.0		
	210	IZMI	42	1027		93	75.0			
	200	GORK	44	1027		93		5.0		
	410	SGMR	44	1106 E	1927.6	644 D	27.0			
	245	SGMR	44	1106 E	1920.9	644 D	135.0			
	245	BOUL	42	1345 .	1503	377			1	
	10700	PENN	1	1351.3	1352.6	4.6	8.1	3.5		
	9400	HUAN	1	1351.9	1352.2	3.4	13.1	5.6		
	9285	ARCE	22	1351.9	1352.8	8.6				
	4995	CANR	3	1351	1352	3	.7	.2		
	2800	OTTA	1	1351.5	1352.3	4.5	3.2	0.8		
	2700	PENN	1	1351.5	1352.5	2	3.2	0.8		
	2695	CANR	3	1351	1352.5	2	.4	.2		
	960	PENN	1	1351.9	1353.4	3.8	1.4	0.5		
	1420	ARCE	2	1352.2	1352.9	1.5				
	1420	CANR	45	1353	1353.5	2	.3	.1		
	2800	OTTA	21	1455	1620	155	2.0	1.2		
	9285	ARCE	22	1458.9	1503.6	12				
	1420	ARCE	2	1500.6	1503.8	4.5U				
	2695	BOUL	45	1501.5	1504	1	1.1	.2		
	2695	CANR	8	1501.5	1503.5	2	1.2	.2		
	2695	SGMR	1	1502.7	1503.7	2.1	6.6	3.0		
	1415	SGMR	1	1502.8	1503.8	1.5	7.8	3.6		
	606	SGMR	4	1502.7	1503.2	2.3	13.2	5.0		
	2800	OTTA	45	1503	1503.8	1.2	6.6	2.2		
	1420	CANR	45	1503	1504.5	2	.6	.1		
	234	POTS	45	1503.1	1503.2	.2	250.0	40.0		
	2695	BOUL	8	1557.5	1558	1	.6	.1		
	2695	BOUL	8	1559	1559	1	.7	.2		
	2695	BOUL	8	1600.5	1601	1	.8	.2		
	2695	BOUL	8	1629.5	1630	1	2.4	.6		
	2800	OTTA	1	1906	1908	4	1.2	0.6		
	2695	PENT	20	2100	2210	125	2.2	1.1U		
	245	BOUL	41	2103	2104	2			1	
	245	BOUL	41	2117	2119	3			1	
	245	BOUL	42	2317	2326	24 D			1	
20	100	HIRA	6	0336.9	0337	1	55.0	15.0		
	3750	TYKW	20	0350	0410	90	2.0	1.0		
	200	GORK	44	0504		161		5.0		
	100	HIRA	45	0718.4	0721	19	220.0	50.0		
	9500	BERL	4	0719.5	0721.1	4.2	17.0	4.4		
	3000	BERL	46	0719.5	0721	3.5	16.0	5.4		
	113	POTS	45	0719 U	0720 U	35	3500.0	15.0		
	9100	GORK	1	0720.9	0721.5	12.3	19.2	3.3		
	8800	MANI	4	0720.5	0721.5	5.9	18.9	7.1		
	4995	CRON	3	0720	0721	2	1.5	.5		
	4995	MANI	4	0720.5	0721.5	5.9	18.5	7.1		
	3750	TYKW	3	0720.5	0721.4	2	16.0	5.0		
	2950	GORK	46	0720.6	0721.6	81.1	57.0			
	2950	GORK		0720.6	0723.2		20.0			
	2695	CRON	3	0720	0721	2	1.6	.6		
	2695	MANI	4	0720.5	0721.5	6.3	19.0	8.3		
	2000	TYKW	1	0720.8	0721.5	1.5	8.0	3.0		
	1500	BERL	46	0720.5	0721.2	2.9	11.0	3.8		
	1420	CRON	3	0720.5	0721.5	2	1.4	.5		
	1415	MANI	2	0720.5	0721.5	5.7	7.9	2.0		
	950	GORK	22	0720.9	0721.6	16.9	3.0	1.0		
	650	GORK	4	0720.3	0721.5	2.1	39.0			
	606	MANI	40	0720.4	0721.4	4	48.0	6.0		
	500	HIRA	6	0720.5	0721.6	1.5	190.0	45.0		
	234	POTS	45	0720.8	0721.1	.4	450.0	25.0		
	221	ABST	3	0720.5	0721	17	28.0	3.0		
	210	IZMI	6	0720.6	0721	1.4	330.0	160.0		
	200	HIRA	6	0720.5	0721	1.5	450.0	60.0		
	200	GORK	6	0720.9	0721.3	1.7	180.0	90.0		
	100	GORK	41	0720	0721.5	17.8	350.0			
	100	GORK		0720	0730.5		300.0			
	100	GORK		0720	0733.5		100.0			
	100	GORK	24	0720.6	0754	47.4	35.0			
	1000	TYKW	1	0721	0721.5	1.5	3.0	1.0		
	23	POTS	45	0721.4E	0722	1.4D	25000.0			
	9100	GORK	29	0722.2	0723	11	9.6	2.3		
	650	GORK	40	0722.4	0732.1	22.8	8.4			
	2950	GORK	29	0723.8	0723.8	78	11.5	5.7		
	4995	CANR	3	1003.5	1004.5	1	1.4	.5		
	410	SGMR	44	1107 E	1802.4	641 D	29.0			
	245	SGMR	44	1107 E	1758.3	641 D	276.8			
	200	GORK	44	1139		81		5.0		
	950	GORK	1	1222.7	1224.3	4.1	2.0	1.0		
	650	GORK	2	1222.7	1223.4	1.9	4.8			

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
20	200	GORK	6	1222.9	1223.3	.7	180.0	90.0		
	9400	HUAN	20	1421.4	1425.7	5.7	11.2	6.1		
	2800	OTTA	1	1430	1430.6	1	2.0	1.0		
	9400	HUAN	22	1511.4	1653.1	104.6	11.2	5.0		
	2800	OTTA	20	1545	1550	30	2.2	1.1		
	2800	OTTA	21	1715	1815	180	8.6	4.0		
	245	BOUL	41	1737	1750	40			2	
	9400	HUAN	20	1745.5	1759.9	30.3	13.1	9.7		
	606	SGMR	23	1748.2	1827.8	72.2	16.7	7.0		
	1415	SGMR	23	1749.5	1801.4	240.5	5.9	2.0		
	2700	PENN	20	1750.6	1815.3	115	11.5	6.3		
	2695	SGMR	23	1750.9	1800.6	112.6	7.2	3.0		
	4995	SGMR	22	1751.2	1802.2	102	7.6	1.6		
	960	PENN	24	1751.4	1815.8		4.1			
	10700	PENN	20	1753.4	1800.7	76.4	12.8	3.7		
	8800	SGMR	22	1756.4	1800.2	46.5	11.0	2.0		
	1420	BOUL	45	1756	1800.5	7	1.5	.3		
	960	PENN	45	1757.6	1758.6	3.5	15.1	1.1		
	2800	OTTA	8	1758.2	1758.3	.5	10.8	5.4		
	2700	PENN	45	1758.3	1800.1	2.8	22.9	3.8		
	2695	BOUL	8	1758	1758.5	1	1.2	.2		
	2695	SGMR	45	1758.2	1800.1	2.3	25.9	5.0		
	1415	SGMR	45	1758	1800.3	3.1	9.9	1.5		
	606	SGMR	4	1758.1	1758.3	.7	21.1	4.5		
	2800	OTTA	8	1759.9	1800.2	.8	19.8	9.9		
	2695	BOUL	8	1800	1800.5	1.5	2.7	.9		
	960	PENN	45	1806.8	1807.2	3.2	38.3	4.0		
	2800	OTTA	8	1808.9	1809.1	.7	17.4	8.7		
	2700	PENN	3	1808.4	1809.2	1.5	23.0	4.9		
	2695	SGMR	3	1808.3	1809.2	2.6	18.1	4.0		
	2695	BOUL	8	1808.5	1809.5	1.5	2.0	.7		
	1420	BOUL	8	1808	1809.5	2.5	2.3	.7		
	1415	SGMR	4	1808.3	1809.3	3.2	26.6	5.0		
	606	SGMR	4	1821	1821.4	1	48.6	10.0		
	2700	PENN	8	1840.4	1840.4	.3	17.2			
	1420	BOUL	8	1901	1901.5	1	.5	.1		
	1420	BOUL	45	2141.5	2143	4	.5	.2		
	1000	TYKW	45	2252	2310	50	12.0	4.0		
21	1420	CRON	45	0004	0010	20.5	1.2	.3		
	1000	TYKW	45	0004	0010	30	24.0	8.0		
	208	VORO	24	0048	0054	12	12.0	10.0		
	1000	TYKW	45	0226	0239	35	16.0	6.0		
	1420	CRON	45	0235	0240	21	1.0	.3		
	100	HIRA	5	0454	0454.3	1	80.0	20.0		
	200	GORK	44	0500 E		420 D		5.0		
	221	ABST	41	0700	0837.5	240	7.0			
	210	IZMI	44	0700		300	50.0			
	410	SGMR	44	1108 E	1548.5	639 D	60.0			
	245	SGMR	44	1108 E	1935.6	639 D	71.2			
	113	POTS	45	1124 U	1239 U	127	22.0	6.0		
	245	BOUL	43	1331 E		608 D			2	
	208	VORO	24	2200	2202	240	9.0	9.0		
	1420	CRON	3	0619.5	0622	5	.2	.1		
	650	GORK	40	0655.3	0713	19	3.8			
	650	GORK	22	0723.9		25	2.6			
	650	GORK	22	0757	0815	93	9.3			
	237	TRST	41	0815.2	0815.4	1.1	61.0			
	100	GORK	6	0824	0824.6	1.4	200.0D			
	210	IZMI	6	0825.4	0825.5	.3	180.0	100.0		
	200	GORK	41	0848.2	0851.2	10.3	200.0			
	200	GORK		0848.2	0854.1		200.0			
	950	GORK	3	0854.1	0854.5	1.3	14.0	5.5		
	113	POTS	45	0854.5	0854.6	.2	200.0	15.0		
	23	POTS	45	0854.5	0854.5	.5	10000.0	1500.0		
	650	GORK	22	0944	0948	10.5	4.9			
	650	GORK	22	1030	1122.5	89 D	10.0	4.6		
	225	HARS	45	1113	1113.5	1	90.0	25.0		
	4995	CANR	3	1121	1122	1	.6	.1		
	113	POTS	5	1121.6	1121.6	.1	250.0	80.0		
	100	GORK	6	1121.2	1122.4	1.8	80.0	40.0		
	225	HARS	45	1155	1156	2	90.0D	20.0		
	606	SGMR	1	1257.3	1258.5	4.3	4.9	2.4		
	9285	ARCE	22	1258.4	1337	94				
	8800	SGMR	1	1258.2	1259.1	3.2	5.1	2.5		
	2695	SGMR	1	1258.3	1258.8	1.4	2.7	1.3		
	1420	ARCE	22	1258.7	1301.4	26.5				
	1420	CANR	8	1258.5	1259	1.5	.5	.1		
	1415	SGMR	1	1258.5	1258.7	7.1	5.4	2.1		
	2800	OTTA	24	1330		5	2.0			
	606	SGMR	46	1335.8	1336.9	16.9	32.4	10.2		
	245	SGMR	6	1335.9	1345.6	16.7	35.8	15.0		
	113	POTS	45	1337.1	1337.3	.9	200.0	40.0		
	8800	SGMR	1	1343.7	1347.1	4.4	5.9	2.9		
	410	SGMR	8	1343.8	1346.6	8.6	13.4	4.4		
	1420	CANR	8	1344.5	1345.5	1	.6	.1		
	225	HARS	45	1344.5	1346	3	60.0	20.0		
	4995	SGMR	1	1345.2	1347.1	5.6	4.9	2.4		
	2800	OTTA	2	1345	1347	3	2.0	1.0		
	1420	ARCE	40	1345.1	1352.5	13.2				

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	1415	SGMR	2	1345.1	1345.5	7.4	3.6	1.3		
	2695	SGMR	1	1346.6	1348.5	4.9	1.6	.8		
	1420	CANR	3	1435	1437.5	4	.5	.1		
	2800	OTTA	8	1452.5	1452.7	.5	4.4			
	2800	OTTA	20	1455	1845	300	4.4	2.4		
	9400	HUAN	20	1827.4	1850.9	49.4	9.3	4.6		
	8800	SGMR	1	1924.5	1925.2	2.6	5.2	1.3		
	4995	SGMR	1	1924.9	1925.2	2	4.9	1.2		
	2800	OTTA	21	2000	2055	160	3.6	1.8		
	4995	BOUL	3	2158	2200	3.5	1.4	.4		
	2695	BOUL	45	2159	2200	6	1.3	.4		
	2695	PENT	3	2159	2159.9	5	12.8	7.0U		
	1420	BOUL	3	2159	2200.5	4.5	1.2	.5		
	2695	PENT	29	2204		12	2.2	1.1U		
	500	HIRA	5	2211.7	2211.7	.5	85.0	40.0		
22	200	GORK	44	0500 E		258		35.0		
	221	ABST	41	0700	0721	240	11.0			
	210	IZMI	44	0700		300	60.0			
	200	GORK	44	0918		162 D		5.0		
	410	SGMR	44	1110 E	1933.1	635 D	91.8			
	245	SGMR	44	1110 E	1948.7	635 D	390.0			
	245	BOUL	44	1331 E		606 D				
	234	POTS	45	0603.3	0603.3	.1	225.0	55.0	2	
	113	POTS	45	0621.5	0621.6	.2	350.0	70.0		
	9500	BERL	21	0632.5E	1123.5	448 D	22.0			
	3000	BERL	21	0634 E	0757.5	387 D	9.9			
	9500	BERL	22	0848.8	0851	6.2	23.0			
	3000	BERL	2	0850.5	0851.6	8.2	12.0			
	2695	CANR	8	0850	0850.5	1.5	.6	.1		
	1420	CRON	3	0850	0851.5	6.5	.8	.3		
	9100	GORK	2	0851	0851.2		11.7			
	1500	BERL	2	0851.2	0851.7	1.8	4.0			
	950	GORK	3	0851.1	0851.5	2.7	3.2	1.0		
	237	TRST	45	0851	0851.2	.6	150.0	30.0		
	234	POTS	5	0851.2	0851.2	.1	120.0	40.0		
	113	POTS	45	0851.2	0851.3	.3	420.0	100.0		
	100	GORK	6	0851.1	0851.5U	.1	100.0D			
	23	POTS	45	0851.4	0851.6	.5	6000.0	1500.0		
	225	HARS	45	1025	1026	2	60.0	15.0		
	3000	BERL	46	1049.2	1051.7	5.8	14.0			
	2695	CANR	45	1049.5	1051.5	5	.8	.2		
	4995	CANR	8	1050	1050.5	1	.8	.1		
	1500	BERL	46	1050.5	1052	8.5	3.6	1.3		
	1420	CANR	45	1050.5	1052	4	.5	.1		
	237	TRST	42	1050.6	1051.9	3.4	87.0			
	225	HARS	45	1050.5	1052	3	50.0	10.0		
	100	GORK	41	1050.9	1051.2	3.9	100.0			
	100	GORK		1050.9	1053.9		100.0			
	9500	BERL	2	1051.4	1051.8	1.1	24.0			
	950	GORK	40	1051.1	1053.3	5.8	4.5			
	2700	PENN	1	1410.8	1413.9	3.8	5.6	2.6		
	9400	HUAN	20	1915.2	1924.4	33.9	11.2	4.2		
	3750	TYKW	20	2312	2327.9	25	20.0	5.0		
	9400	TYKW	3	2324	2327.9	10	27.0	11.0		
	8800	MANI	4	2325.3	2327.9	4	33.0	11.0		
	4995	BOUL	3	2325	2327.5	3.5	2.7	1.1		
	4995	MANI	4	2325.3	2327.6	6.1	32.3	12.9		
	2695	CRON	3	2326 U	2328.5U	6.5U	.8	.3		
	2000	TYKW	1	2326	2327.9	4	2.0	1.0		
	4995	CRON	3	2328 U	2331.5U	7.5U	3.2	1.2		
	9400	TYKW	29	2334		80	4.0	2.0		
	3750	TYKW	29	2337		80	6.0	3.0		
23	1420	CRON	3	0000.5	0003.5	7	.4	.1		
	3750	TYKW	45	0202	0205.7	4.5	11.0	2.0		
	2695	CRON	45	0202.5	0205	3.5	1.1	.4		
	4995	MANI	2	0203.4	0204	3.6	8.6	2.9		
	2695	MANI	4	0203	0205.6	4.2	11.3	2.5		
	1420	CRON	45	0203	0206	5	.7	.3		
	1415	MANI	2	0203.4	0205.6	4.1	4.0	1.0		
	9750	IRKU	1	0205	0205.6	1	18.3			
	9400	TYKW	3	0205	0205.6	1.2	25.0	8.0		
	8800	MANI	4	0205.1	0205.6	2.3	30.9	9.5		
	4995	CRON	3	0205	0205.5	1	.9	.3		
	606	MANI	4	0205	0205.5	1.5	41.4	7.8		
	500	HIRA	27	0237	0510	180	15.0	3.0		
	9750	IRKU	20	0242	0247.2	18	11.8	4.2		
	1420	CRON	45	0242.5	0256	30	1.3	.3		
	2695	CRON	3	0245.5	0246.5	1.5	.4	.1		
	9400	TYKW	1	0246.5	0247	1.5	3.0	1.0		
	4995	MANI	1	0246.3	0247.1	2	2.9	1.4		
	3750	TYKW	1	0246.5	0247	1.5	3.0	1.0		
	2695	MANI	1	0246.3	0247.3	2.7U	2.5	1.3U		
	2000	TYKW	1	0246.5	0247.1	2.5	8.0	3.0		
	1415	MANI	1	0246.3	0247.3	3.4	9.1	2.0		
	1000	TYKW	1	0246.5	0247.2	1.5	8.0	2.0		
	606	MANI	1	0246.4	0247.1	2.6	3.4	1.1		
	1000	TYKW	45	0253	0255.2	14	6.0	2.0		
	1415	MANI	1	0254.6	0255.5	3.3	8.1	2.0		

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OCT 1972	FREQUENCY STATION	TYPE	STARTING TIME UT		TIME OF MAXIMUM UT	DURATION MINUTES		FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	REMARKS
23	2000 TYKW	1	0255		0255.2	1		2.0	1.0		
	606 MANI	2	0255		0258.2	5		6.7	1.1		
	950 GORK	22	0500	E	0518.4	45		7.0	3.0		
	200 GORK	44	0500	E		480	D		30.0		
	221 ABST	41	0700		1038.5	240		37.0			
	210 IZMI	44	0700			300		140.0			
	100 GORK	44	0805			115			5.0		
	410 SGMR	44	1111	E	1844.6	633	D	76.4			
	245 SGMR	44	1111	E	1902	633	D	492.0			
	245 BOUL	44	1433	E		543	D			2	
	606 SGMR	43	1847.9		1928.2	176.1	D	13.7			
	650 GORK	22	0608.1		0627.8	26.8		4.0	2.0		
	950 GORK	22	0609		0611.7	36		6.0	3.0		
	950 GORK	1	0718.8		0718.8	.6		2.4	1.2		
	650 GORK	1	0718.9		0719	.6		4.6			
	234 POTS	45	0719.9		0720	.1		450.0	120.0		
	650 GORK	22	0724		0800	95		11.8	6.0		
	950 GORK	22	0741.4		0756.2	60		5.3	2.5		
	2950 GORK	20	0806	E	0945.3	198		29.0	14.0		
	650 GORK	22	0859.8		0940	104		8.8	4.0		
	113 POTS	45	0906.8		0906.9	.5		200.0	30.0		
	408 TRST	42	1056.4		1100.9	5		76.0	D		
	113 POTS	45	1101.6		1101.6	.3		420.0	100.0		
	9100 GORK	1	1126.6		1126.9	.7		11.8	5.9		
	4995 SGMR	45	1126.7		1127.2	2.1		34.7	7.0		
	2695 SGMR	45	1126.7		1127.3	2.1		63.0	12.0		
	1415 SGMR	45	1126.7		1127.2	2		15.4	3.0		
	408 TRST	41	1205.4		1205.8	.6		79.0			
	113 POTS	45	1248.8		1248.8	.2		100.0	20.0		
	23 POTS	5	1248.8		1249.2	.7		15000.0	5000.0		
	15400 SGMR	4	1301.6		1301.8	.6		26.2	5.0		
	8800 SGMR	3	1301.8		1302	.6		14.9	3.8		
	4995 SGMR	2	1301.9		1302	.6		4.4	2.0		
	2695 SGMR	1	1301.6		1301.8	.6		4.1	2.0		
	113 POTS	40	1336.6		1338.6	2.1		200.0	5.0		
	23 POTS	45	1336		1337.1	3.1		15000.0	1800.0		
	2800 OTTA	24	1410			10		2.6			
	2800 OTTA	24	1620			20		2.5			
	2800 OTTA	23	1640		1655	170		2.6	1.3		
	1420 BOUL	3	1756.5		1757.5	1.5		.4	.2		
	1420 BOUL	3	1839.5		1844	8		.5	.2		
	1415 SGMR	40	1840.4		1844.6	6.7		3.6	1.0		
	606 SGMR	40	1841.3		1844.5	6.6		17.1	4.3		
	2695 SGMR	1	1859.3		1901.5	7.8		6.8	3.0		
	8800 SGMR	4	1901.4		1901.6	4.1		19.0	5.0		
	7000 SAOP	3	1901.4		1901.6	.9	U	16.5	7.8		
	4995 SGMR	3	1901.4		1901.6	6		12.0	4.0		
	2800 OTTA	1	1901.2		1901.5	1		5.4	1.4		
	1415 SGMR	22	1901.2		1901.5	21.4		3.4	1.3		
	9400 HUAN	21	1956.9		2025.3	66.9		13.5	3.1		
	15400 SGMR	4	2027.5		2027.8	1.4		20.5	4.0		
	9400 HUAN	1	2027.1		2027.4	1.1		21.1	8.4		
	8800 SGMR	4	2027.4		2027.9	1.4		13.8	3.0		
	9400 HUAN	22	2112.6		2121.1	13.2		19.2	7.1		
	200 HIRA	6	2116.8		2117	.5		580.0	70.0		
	100 HIRA	5	2116.7		2117	1		200.0	70.0		
	100 HIRA	6	2120		2121.6	3		110.0	35.0		
	2695 SGMR	4	2131.6		2133.2	2.9		76.0	19.0		
	1415 SGMR	4	2131.3		2132.8	3.6		63.0	16.0		
	606 SGMR	4	2131.5		2132.8	3.4		26.1	5.0		
	4995 SGMR	4	2132		2133.3	2.4		85.0	21.0		
	500 HIRA	27	2136		2225.7	106		50.0	10.0		
	9400 HUAN	22	2142.6		2208.9	28.2		13.5	4.9		
	1420 BOUL	8	2206		2206.5	1.5		1.3	.3		
	200 HIRA	6	2241		2241.7	1		150.0	50.0		
	100 HIRA	5	2241.5		2241.7	1		60.0	20.0		
24	100 HIRA	5	0021.8		0022	1		55.0	15.0		
	9750 IRKU	20	0045		0047	15		7.5			
	208 VORO	24	0051		0142	69		21.0	16.0		
	3750 TYKW	20	0110		0230	150		5.0	2.0		
	9400 TYKW	20	0205		0230	80		4.0	2.0		
	100 HIRA	5	0344		0344	1	D	55.0	25.0	U	
	200 GORK	44	0504	E		476	D		100.0		
	221 ABST	41	0700		0836.5	240		10.0			
	210 IZMI	44	0700			300		160.0			
	100 GORK	44	0924			216			10.0		
	606 SGMR	44	1112	E	1800.1	630	D	273.0			
	410 SGMR	44	1112	E	1539.9	630	D	81.2			
	245 SGMR	44	1112	E	1806.8	630	D	976.0			
	245 BOUL	44	1333	E		603	D			3	
	200 HIRA	44	2100		0040	695	D	170.0	80.0		
	100 HIRA	44	2100		0110	695	D	190.0	60.0		
	208 VORO	44	2200		0053	240		158.0	64.0		
	650 GORK	4	0507.4		0508	1.6		13.2			
	606 MANI	8	0507.6		0507.9	.8		22.4	5.6		
	200 GORK	6	0507.6		0508.1	1.4		150.0	D		
	100 HIRA	6	0507.4		0507.8	1.6		220.0	110.0		
	100 GORK	6	0507.7		0508.7	1.2		1000.0			
	100 HIRA	5	0524.8		0524.9	1		180.0	40.0		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
24	100	GORK	6	0525	0525.2	1	100.0D			
	950	GORK	22	0612.8	0626	17	2.3	1.0		
	9750	IRKU	3	0628.8	0629.7	90 D	29.2			
	8800	MANI	4	0628.8	0629.8	4.9	26.9	9.0		
	4995	MANI	4	0628.8	0629.8	5.5	11.1	5.6		
	100	HIRA	5	0631.8	0631.8	1.4	140.0	40.0		
	650	GORK	1	0632.3	0632.5	.5	4.2			
	100	GORK	41	0632	0632.2	3.2	100.0D			
	100	GORK		0632	0634.8		100.0			
	950	GORK	1	0643.7	0644.4	1.6	2.0	1.0		
	650	GORK	40	0643.9	0644.1	1.5	7.1			
	100	HIRA	6	0643.8	0644.4U	1.2D	180.0U	70.0U		
	234	POTS	40	0644.3	0648.1	3.8	700.0	3.0		
	113	POTS	40	0644.1	0644.1	4.3	1400.0	55.0		
	100	GORK	6	0644	0644.7	1.3	1000.0			
	23	POTS	45	0644.2	0644.4	1.8	10000.0	2000.0		
	100	HIRA	6	0713.4	0715.5	3	210.0	60.0		
	100	GORK	6	0713.5	0715.8U	3	150.0D			
	113	POTS	45	0714.7	0715.5	1	130.0	15.0		
	2950	GORK	20	0724	0814.5	123.8	17.0	3.6		
	237	TRST	45	0741.8	0741.9	.1	80.0			
	10500	BERN	1	0743.3	0744.3	5	5.0			
	950	GORK	22	0746.8	0807.8	64.2	7.4	3.3		
	100	GORK	41	0752.4	0754.5	4.7	150.0			
	100	GORK		0752.4	0756.4		150.0			
	113	POTS	45	0756.2	0756.9	.5	200.0	15.0		
	1420	CRON	3	0800	0803.5	5.5	.4	.1		
	650	GORK	4	0806.5	0808.1	4.1	12.9			
	650	GORK	22	0828.7	0839.9	18.1	3.0	2.0		
	1420	CANR	3	0832.5	0834	2	.3	.1		
	237	TRST	42	0834.2	0836.3	5.2	1700.0U			
	234	POTS	40	0834	0835	20	700.0	30.0		
	225	HARS	45	0834.5	0836	3.5	420.0	110.0		
	210	IZMI	41	0834	0834.1	6	2170.0			
	200	GORK	41	0834.4	0834.5	2.8	150.0D			
	200	GORK		0834.4	0836		2500.0			
	100	GORK	41	0834.5	0834.7	4.3	150.0D			
	100	GORK		0834.5	0836.6		1500.0			
	23	POTS	40	0834	0836.5	21	6000.0	120.0		
	10500	BERN	3	0842.8U	0843 U	3.5	12.0			
	9500	BERL	4	0842.8	0843	6.5	18.0	3.3		
	9400	SLOU	3	0843	0843.2	1	27.0			
	210	IZMI	41	0846	0848.7	6	680.0			
	100	GORK	41	0847.7	0849.9	6.7	2000.0			
	100	GORK		0847.7	0849.9		2000.0			
	100	GORK		0847.7	0854.1		2000.0			
	237	TRST	42	0848.1	0852.9	4.8	390.0D			
	3000	BERL	20	0854	0906.2	27	3.5			
	9500	BERL	20	0902.5	0904.5	15	9.8			
	1500	BERL	21	0907.4	0913.1	11	2.6			
	234	POTS	45	0910.5	0910.5	.1	250.0	50.0		
	650	GORK	40	0912	0912.6	1	4.8			
	1420	CRON	8	0913	0914	2.5	.8	.2		
	650	GORK	4	0913.6	0914.3	1.3	24.0	5.9		
	1500	BERL	4	0914	0914.3	1	6.3			
	1420	CANR	8	0914	0915	1	.6	.1		
	100	GORK	6	0919	0919.2	1	150.0D			
	950	GORK	20	0939	0942	12	4.0	2.0		
	9500	BERL	20	0941	1011.9	69	11.0			
	650	GORK	40	0941.4	0941.9	10.5	7.3			
	9285	ARCE	22	0947.9	1012.5	89				
	3000	BERL	20	0953	1020	56	4.9			
	237	TRST	41	0954.3	0955.3	2.1	250.0U			
	1500	BERL	21	0955.5	1018	53	3.6			
	100	GORK	6	0955	0956	1.8	150.0			
	1500	BERL	3	1007.5	1007.6	.5	7.2			
	650	GORK	40	1015	1019.4	16.7	8.9			
	650	GORK		1015	1025		16.1			
	950	GORK	4	1016.1	1018.7	5.6	7.2			
	4995	CANR	3	1018.5	1019	1.5	.4	.2		
	3100	CRIM	1	1019	1020	5	3.0	1.0		
	2950	GORK	20	1019.5	1104.9	87	21.0	11.0		
	1500	BERL	4	1019.5	1020.4	1.3	7.4			
	1420	CANR	8	1019.5	1020.5	2	.6	.1		
	1500	BERL	46	1024.5	1025.7	2.2	6.3			
	950	GORK	4	1024.4	1025	5.5	5.0			
	1420	CANR	45	1025	1026	2	.6	.2		
	23	POTS	45	1026.4	1026.7	.7	7000.0	1700.0		
	4995	CANR	3	1043.5	1045.5	1.5	.6	.2		
	2695	CANR	3	1044	1045.5	3	.5	.1		
	1500	BERL	4	1045	1045.4	4	11.0			
	1420	ARCE	2	1045.1	1045.6	1.5				
	1420	CANR	8	1045	1045.5	1.5	1.2	.2		
	650	GORK	4	1052.6	1103.3	45	6.5			
	237	TRST	45	1103.4E	1103.6	.6	230.0			
	1420	ARCE	4	1107.7	1108.1	.9				
	9285	ARCE	23	1131.2	1254	193				
	23	POTS	45	1134.8	1135.4	1.1	5000.0	1200.0		
	650	GORK	4	1139.1	1143.8	12.5	4.3			
	950	GORK	3	1146.8	1147	.6	8.6	4.0		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
24	650	GORK	23	1154		17.7				
	960	PENN	40	1205		195				
	237	TRST	41	1205.9	1206.4	.8	130.0			
	950	GORK	4	1206.1	1206.2	1	16.0	8.0		
	650	GORK	4	1206	1206.3	.8	14.7			
	10700	PENN	24	1226.4	1905		17.6			
	23	POTS	45	1233.5	1233.6	.8	20000.0	5000.0		
	410	SGMR	6	1236.6	1237.7	4.9	68.0	9.0		
	245	SGMR	6	1236.8	1237.9	4.7	135.0	15.0		
	237	TRST	42	1236.8	1237.9	4.8	250.0			
	2950	GORK		1237.5U	1237.8	1	15.0			
	1500	BERL	4	1237	1237.7	1.4	8.4	2.6		
	1420	CANR	8	1237	1238	2	1.1	.4		
	1415	SGMR	3	1237	1237.8	1.5	13.6	3.0		
	950	GORK	4	1237.2	1238	1.4	11.3	4.7		
	650	GORK	4	1237.3	1238	1.1	48.0			
	606	SGMR	4	1237	1237.7	1.4	66.0	14.0		
	2700	PENN	24	1244	1935.2		14.5			
	4995	SGMR	22	1245.8	1253.8	45.7	39.2	18.0		
	2800	OTTA	21	1245	1335	115	2.6	1.3		
	2695	SGMR	22	1245.3	1254	64.1	11.8	5.0		
	2695	CANR	45	1245.5	1254	12	1.2	.4		
	9400	SLOU	46	1246	1253.9	14	45.0			
	9400	HUAN	21	1246	1346.1	99.2	37.0	9.5		
	8800	SGMR	22	1246.1	1253.8	25.4	29.5	12.0		
	3000	BERL	46	1246	1253.8	38	15.0	4.2		
	4995	CANR	45	1247	1253	9	2.2	.7		
	3100	CRIM	3	1247	1254	20 D	21.0	7.0		
	10700	PENN	3	1248.6	1253.8	19.6	24.0	13.0		
	10500	BERN	3	1248.4U	1251.6U	14	14.0			
	10500	BERN		1248.4U	1253.8U		17.0			
	9500	BERL	46	1248.5	1253.5	34	31.0	6.4		
	15400	SGMR	3	1249.5	1253.8	8.3	13.9	3.0		
	9400	HUAN	4	1249.3	1253.6	5.8	33.3	15.5		
	7000	SAOP	45	1249.2	1253.5	9.6	43.4			
	7000	SAOP	4	1249.2	1251.6	3.3	29.5	18.0		
	2700	PENN	3	1249	1251.8	8.7	15.4	8.8		
	2800	OTTA	4	1250 E	1253.7	7 D	10.2			
	1420	CANR	3	1250.5	1254	7.5	.3	.1		
	234	POTS	40	1251.8	1251.9	1.2	1400.0	100.0		
	7000	SAOP	4	1252.5	1253.8	6.6	43.4	17.0		
	237	TRST	42	1252.8	1255.1	2.6	290.0U			
	234	POTS	45	1309.1	1309.2	.1	350.0	70.0		
	237	TRST	45	1310.1	1310.4	.5	200.0U	61.0		
	10700	PENN	1	1314.5	1314.7	2.3	7.8	2.5		
	9400	SLOU	4	1314	1314.8	1.5	11.0			
	9400	HUAN	1	1314.3	1314.5	1.8	9.2	3.2		
	237	TRST	45	1325	1325.2	.8	120.0	35.0		
	9500	BERL	46	1334 U	1343.7	29 U	40.0	8.0		
	15400	SGMR	3	1336.7	1337.1	1.8	12.6	3.0		
	10700	PENN	3	1336.8	1343.8	19.4	53.6	14.1		
	10500	BERN	1	1336.6U	1337.2U	23	9.0			
	10500	BERN	3	1336.6U	1343.7U		30.0			
	9400	SLOU	4	1336.9	1337.2	1.5	23.0			
	9400	HUAN	1	1336.9	1336.9	1.3	22.2	14.0		
	8800	SGMR	3	1336.8	1337.3	3.3	11.5	3.0		
	4995	SGMR	1	1337.9	1338.5	1.5	4.0	1.5		
	9285	ARCE	4	1342.1	1343.7	6.5				
	4995	SGMR	1	1342.4	1344.5	8	7.2	1.8		
	410	SGMR	6	1342	1344.4	3.3	34.7	6.9		
	245	SGMR	7	1342	1342.7	2.7	285.0	30.0		
	237	TRST	41	1342	1342.6	2.8	700.0U			
	234	POTS	45	1342.5	1342.6	.1	400.0	100.0		
	15400	SGMR	3	1343	1343.6	5	54.0	13.5		
	9400	SLOU	4	1343.1	1343.7	7	57.0			
	9400	HUAN	3	1343	1343.4	2.4	38.8	15.2		
	8800	SGMR	3	1343	1343.6	7	31.6	8.0		
	23	POTS	40	1343.9	1345.6	2.5	60000.0	6000.0		
	2800	OTTA	1	1344	1344.3	1	.8	0.4		
	1415	SGMR	1	1344.3	1344.5	1.5	2.1	1.0		
	606	SGMR	3	1344.3	1344.3	.7	22.6	5.6		
	237	TRST	41	1354.6	1355	1.5	200.0U			
	237	TRST	42	1447.9	1448.1	11 D	440.0			
	237	TRST		1447.9	1450.2		350.0			
	237	TRST		1447.9	1454.2		500.0			
	237	TRST		1447.9	1458.6		340.0D			
	2800	OTTA	1	1454	1455.5	6	1.6	0.8		
	1420	CANR	45	1454	1455	3.5	.5	.2		
	2800	OTTA	21	1505	1510	20	5.0	1.7		
	9285	ARCE	40	1507	1513.5	13				
	4995	SGMR	20	1507.4	1510.2	11.5	8.0	4.0		
	2695	CANR	3	1507	1509.5	4	.8	.3		
	4995	CANR	3	1508	1508.5	1	.8	.3		
	2695	SGMR	1	1508.6	1510.2	9.2	3.6	1.8		
	1420	CANR	8	1508.5	1510.5	2	2.5	.5		
	4995	BOUL	3	1509.5	1510	1.5	1.0	.3		
	2695	BOUL	3	1509	1510	3	.5	.2		
	1420	ARCE	3	1509.6	1510.1	1				
	1420	BOUL	8	1509.5	1510.5	1	2.4	.9		
	1415	SGMR	3	1509	1510.1	1.6	26.0	9.0		

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24	2800	OTTA	1	1514.5	1516	2.5	2.8	1.4		
	2695	CANR	3	1514	1515.5	4	.7	.3		
	237	TRST	42	1514.8	1516.8	2 D	590.0D			
	2695	BOUL	3	1515	1516	2	.5	.2		
	9400	HUAN	21	1520.9	1558.2	75.6	18.5	7.8		
	960	PENN	45	1521.2	1535	23.1	46.7	7.1		
	1420	CANR	8	1525.5	1526.5	2	1.0	.3		
	9285	ARCE	4	1526.5	1527	1.5				
	1420	BOUL	8	1526	1526.5	2.5	1.0	.4		
	9285	ARCE	3	1531.6	1532	1.6				
	4995	SGMR	23	1532	1537	48	5.0	2.0		
	9285	ARCE	29	1533.2		15 D				
	8800	SGMR	23	1534	1537	25	15.6	7.0		
	2700	PENN	20	1534.6	1537.2	38	18.1	6.2		
	2695	SGMR	23	1534.2	1537	33.6	15.2	6.0		
	2695	CANR	3	1534.5	1537	3.5	1.6	.5		
	1420	ARCE	46	1534.7	1535.7	5.8				
	1420	ARCE		1534.7	1535.7	1.9				
	1420	BOUL	45	1534.5	1537.5	10	14.4	3.9		
	1420	CANR	45	1534	1537	7	13.9	2.8		
	1415	SGMR	46	1534	1535.8	6.5	147.0	37.0		
	15400	SGMR	3	1535.3	1537	4.7	10.7	4.5		
	10700	PENN	3	1535.4	1537.2	4.6	13.7	7.0		
	2800	OTTA	4	1535	1537	6	11.2	5.6		
	2695	BOUL	3	1535		7.5				
	1420	ARCE		1536.6	1537	3.9				
	2800	OTTA	30	1541		75	4.8	2.4		
	960	PENN	40	1545.6		294				
	1420	BOUL	45	1546.5	1547.5	4	1.3	.4		
	1420	CANR	45	1546.5	1547.5	3	1.3	.5		
	1415	SGMR	4	1547.1	1549	2.5	15.4	4.0		
	606	SGMR	4	1547	1549	4.3	81.4	20.4		
	9400	HUAN	41	1551.7	1553.5	4.4	64.7	19.6		
	9400	HUAN		1551.7	1554.5		40.0			
	15400	SGMR	45	1552.3	1553.5	4.1	71.2	18.0		
	10700	PENN	45	1552.7	1553.7	3	72.6	12.3		
	9400	SLOU	46	1552	1553.2	5	111.0U			
	4995	CANR	45	1552.5	1553	2.5	1.8	.4		
	19000	SLOU	46	1553.6	1553.9	1.5	58.0			
	8800	SGMR	45	1553.1	1553.5	2	40.0	9.9		
	4995	BOUL	45	1553	1553.5	2	3.1	.6		
	4995	SGMR	45	1553.4	1553.6	3.1	26.0	6.4		
	2800	OTTA	1	1553	1553.5	1	2.6	1.3		
	2695	SGMR	1	1553	1553.5	3	3.2	1.0		
	1420	CANR	3	1618.5	1619	1.5	.5	.1		
	4995	BOUL	3	1628	1628.5	2	1.2	.4		
	9400	HUAN	21	1647.5	1752.5	104	16.6	7.2		
	4995	CANR	3	1649.5	1651	4	.3	.1		
	4995	BOUL	47	1701	1716.5	36	56.2	15.8		
	2800	OTTA	21	1720	1755	70	3.8	2.0		
	4995	BOUL	45	1745.5	1751	40	11.5	5.7		
	7000	SAOP	8	1753.3	1753.5	.5	14.2	7.1		
	2800	OTTA	8	1753.3	1753.3		2.4			
	9400	HUAN	4	1759.5	1800.6	5.5	114.6	31.6		
	15400	SGMR	4	1800.2	1800.6	3.6	32.5	8.1		
	10700	PENN	45	1800	1800.4	5.6	73.0D			
	8800	SGMR	4	1800.2	1800.6	4	125.0	31.3		
	7000	SAOP	46	1800	1800.6	3.9	85.5			
	4995	SGMR	4	1800.3	1800.6	3.1	43.5	8.0		
	2800	OTTA	4	1800	1805	2	14.4	7.2		
	2700	PENN	3	1800	1800.7	3	28.0D			
	2695	BOUL	3	1800	1801	4.5	.9	.3		
	2695	SGMR	46	1800.2	1800.6	11.5	14.4	3.6		
	1420	BOUL	45	1800.5	1801.5	1.5	3.2	1.2		
	1415	SGMR	46	1800.3	1807.9	12.7	36.6	7.4		
	2700	PENN	8	1804.8	1804.9	.2	16.0			
	2800	OTTA	8	1808	1808		6.2			
	2695	BOUL	3	1810.5	1811.5	1.5	.4	.1		
	18	BOUL	6	1814	1818	5			3	
	18	MCMA	6	1815	1816	3			1	
	4995	BOUL	3	1837.5		14 U	30.1U			
	9400	HUAN	22	1841.8	1856.7	65	25.9	13.4		
	4995	SGMR	20	1852.4	1856.9	10.3	9.8	4.9		
	2695	SGMR	20	1853	1857.7	11.8	4.0	2.0		
	1415	SGMR	22	1853	1856.8	11.7	4.8	2.0		
	606	SGMR	46	1853.1	1855.1	11.1	69.0	28.0		
	8800	SGMR	22	1854.3	1857.6	10.2	15.5	7.9		
	2800	OTTA	1	1856	1857.5	3	2.0	1.0		
	2695	BOUL	3	1856	1857.5	4	.3	.1		
	2800	OTTA	1	1956.7	1957	3.3	2.4	1.2		
	410	SGMR	6	1956.7	1956.9	.5	120.0	30.0		
	245	SGMR	49	1956.3	1957	1.8	7000.0	1750.0		
	2695	BOUL	3	1957	1957.5	3.5	.5	.2		
	1420	BOUL	45	1957	1957.5	5.5	.5	.2		
	1420	BOUL		1957	1958.5					
	9400	HUAN	21	2006.7	2126.8	94.8	18.5	8.0		
	2800	OTTA	8	2009.5	2009.5		3.0			
	2800	OTTA	24	2025		50	5.8			
	960	PENN	1	2040.4	2040.7	1.1	7.6	2.0		
	9400	HUAN	2	2041.7	2044	3.1	44.4	11.9		

SOLAR RADIO EMISSION
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OCTOBER 1972

OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
24	2700	PENN	45	2041.5	2046.7	7.7	25.0	7.9		
	15400	SGMR	46	2043.4	2046.7	4.4	41.6	16.0		
	10700	PENN	3	2043.7	2043.9	1.8	34.5	7.4		
	8800	SGMR	46	2043.5	2046.7	4.9	160.0	40.0		
	4995	SGMR	46	2043.5	2046.8	5.1	30.8	12.2		
	2800	OTTA	1	2043.7	2043.9	1	3.6	2.0		
	2695	SGMR	46	2043.3	2046.6	4.9	11.8	4.8		
	1415	SGMR	46	2043.6	2044.2	4.6	18.7	6.8		
	960	PENN	45	2043.7	2046.9	4.7	26.0	3.9		
	2695	BOUL	45	2044	2047	4.5	.8	.2		
	1420	BOUL	45	2044	2044.5	5	1.5	.5		
	9400	HUAN	3	2045.9	2046.7	2.6	129.4	32.6		
	4995	BOUL	8	2045.5	2046.5	1.5	4.3	1.5		
	10700	PENN	3	2046.3	2046.8	2	113.0	19.7		
	2800	OTTA	3	2046	2046.7	2	12.6	4.2		
	2800	OTTA	1	2112.5	2113	1	2.0	1.0		
	9400	HUAN	20	2147	2148.2	10.9	9.2	3.7		
	9400	HUAN	20	2202.9	2212.1	14.2	18.5	7.4		
	4995	CRON	8	2243.5	2244.5	14.5	15.2	3.2		
	2695	CRON	3	2243.5	2245.5	10.5	14.8	3.8		
	1420	BOUL	3	2243.5	2245.5	6	5.1	1.4		
	1420	CRON	3	2243.5	2245	12	4.5	1.7		
	9400	TYKW	45	2244	2244.2	20	190.0	15.0		
	8800	MANI	4	2244.1	2244.3	12.4	210.0	17.8		
	4995	MANI	4	2244.1	2244.3	12.4	200.0	13.4		
	2695	BOUL	3	2244	2245.5	30.5	16.5	5.7		
	2695	PENT	4	2244	2244.2	6	134.0	34.0U		SPIKE=214
	2695	MANI	4	2244.1	2244.3	12.4	173.0	11.6		
	2000	TYKW	3	2244	2244.2	10	110.0	20.0		
	1415	MANI	4	2244.1	2244.3	8.4	46.4	10.3		
	1000	TYKW	3	2244	2244.2	10	23.0	8.0		
	606	MANI	40	2244	2247.7	4.2	46.7	3.8		
	4995	BOUL	3	2245	2245	3.5	18.9	6.6		
	2695	PENT	29	2250		10	5.8	2.9U		
	606	MANI	40	2337.1	2342.1	172	660.0	42.7		
	2695	CRON	21	2340.5	2342	10.8	2.4	.5		
	9400	TYKW	3	2341.5	2342.2	1.5	20.0	4.0		
	8800	MANI	4	2341.9	2342.4	3.3	22.2	4.4		
	4995	MANI	4	2341.9	2342.4	3.3	29.5	6.7		
	3750	TYKW	3	2341.5	2342.3	4	29.0	5.0		
	2695	MANI	4	2341.9	2342.4	3.3	25.5	5.8		
	2000	TYKW	3	2341.8	2342.3	3	15.0	6.0		
	1420	CRON	8	2341.5	2342	4	1.4	.4		
	1415	MANI	3	2341.9	2342.4	3.3	13.4	2.1		
	1000	TYKW	3	2341.8	2342.3	1.5	23.0	6.0		
	2695	PENT	3	2342	2342.2	1	19.0	6.0U		
	500	HIRA	6	2342	2342.3	1	620.0	85.0		
	9400	TYKW	3	2351.8	2352.1	3	15.0	4.0		
25	4995	CRON	45	0009.5	0010	5	.7	.3		
	4995	CRON		0009.5	0012.5					
	3750	TYKW	20	0026	0032	35	8.0	3.0		
	9400	TYKW	45	0027	0032.2	30	28.0	6.0		
	4995	MANI	22	0027.5	0032.2	23	18.8	2.7		
	8800	MANI	22	0029.4	0032.4	21.1	31.1	4.4		
	4995	CRON	21	0030	0032	20	3.1	.4		
	9750	IRKU	1	0031.4	0032.4	4.5	32.0			
	9400	TYKW	1	0105	0107	10	8.0	3.0		
	3750	TYKW	20	0105	0125	65	2.0	1.0		
	3750	TYKW	20	0222	0227	18	6.0	3.0		
	2000	TYKW	20	0240	0253	80	6.0	2.0		
	9750	IRKU	20	0247	0322	63	25.7	19.3		
	1420	CRON	45	0249.5	0253	25	.7	.1		
	3750	TYKW	20	0250	0257	70	7.0	4.0		
	1420	CRON	3	0456.5	0457	2	.2	.1		
	200	GORK	44	0500 E		480 D		30.0		
	100	GORK	44	0500 E		480 D		30.0		
	221	ABST	41	0700	0738.8	240	16.0			
	210	IZMI	44	0700		300	100.0			
	606	SGMR	44	1113 E	1412.2	628 D	140.0			
	410	SGMR	44	1113 E	1456	628 D	350.0			
	245	SGMR	44	1113 E	1453.4	628 D	600.0			
	245	BOUL	44	1322 E		613 D			2	
	200	HIRA	44	2100	0040	695 D	200.0	30.0		
	208	VORO	44	2200	0156	240	45.0	45.0		
	9750	IRKU	20	0501	0506	60	32.5	18.2		
	9750	IRKU		0501	0535.5		40.5			
	9750	IRKU		0501	0539.5		40.5			
	9400	TYKW	3	0503	0505	10	18.0	7.0		
	8800	MANI	4	0503.7	0504.6	7.6	26.6	8.9		
	4995	MANI	4	0503.7	0504.4	6.6	13.4	5.4		
	2695	MANI	3	0503.6	0504.5	4.4	11.6	3.5		
	1415	MANI	1	0503.6	0504.5	4.8	3.1	2.1		
	650	GORK	4	0503	0504.5	4.5	55.0	7.1		
	4995	CRON	21	0504	0504.5	4.5	1.1	.2		
	3750	TYKW	1	0504	0504.2	1	5.0	2.0		
	950	GORK	3	0504.3	0504.6	1.9	4.7	1.5		
	606	MANI	4	0504	0504.4	5.4	53.0	12.9		
	500	HIRA	5	0504	0504.4	.8	35.0	15.0		
	3750	TYKW	20	0520	0535	40	8.0	3.0		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
25	2695	CRON	3	0523.5	0524	1	.4	.2		
	9750	IRKU	20	0617	0631.8	20	56.6	20.3		
	9750	IRKU		0617	0632.7		98.0			
	9100	GORK	21	0619.3	0628.2	17.9	25.3	8.9		
	2695	CRON	45	0630	0632.5	5.5	1.5	.6		
	2695	MANI	4	0630.7	0631.8	3.5	18.7	3.5		
	9400	TYKW	45	0631	0632.5	3	100.0	20.0		
	9100	GORK	46	0631.8	0632.2	2.7	58.0	30.0		
	9100	GORK		0631.8	0632.9		111.0			
	8800	MANI	4	0631.2	0632.6	5.8	109.0	40.8		
	4995	CRON	45	0631	0631.5	3.5	3.9	1.1		
	4995	MANI	4	0631.2	0631.8	4.1	44.2	8.6		
	3750	TYKW	45	0631	0631.8	4	25.0	7.0		
	3100	CRIM	45	0631	0632	5	15.0	5.0		
	3100	CRIM		0631	0633		12.0			
	2000	TYKW	45	0631.5	0632.9	2.5	13.0	4.0		
	1420	CRON	45	0631	0632	3.5	2.2	.5		
	1415	MANI	4	0631	0631.8	4.6	20.3	4.5		
	1000	TYKW	45	0631.5	0632.9	2.5	13.0	4.0		
	950	GORK	45	0631.8	0632	2.2	4.7			
	950	GORK		0631.8	0633.2		9.0			
	650	GORK	4	0631.8	0632.9	4	43.0	4.6		
	606	MANI	4	0631.5	0632.6	5	93.0	17.7		
	100	HIRA	45	0631	0632.8	2.5	230.0	150.0		
	100	GORK	6	0631.6	0633	2.3	1000.0			
	500	HIRA	6	0632.6	0632.6	1	350.0	65.0		
	234	POTS	40	0632	0632.5	.8	900.0	60.0		
	200	HIRA	6	0632	0632.5	2	610.0	120.0		
	200	GORK	6	0632	0633	1.7	1500.0			
	950	GORK	20	0731.6	0742.2	14.6	2.0	1.0		
	650	GORK	23	0732	0749.6	36.4	3.1	1.5		
	100	GORK	41	0736.2	0738	2.9	550.0			
	100	GORK		0736.2	0738.6		600.0			
	237	TRST	42	0738.6	0739.4	4	220.0			
	1415	MANI	1	0741.7	0742.1	.7	3.4	1.1		
	606	MANI	4	0741.1	0742.1	1.7	35.4	7.1		
	650	GORK	4	0742	0742.4	.9	33.0	5.9		
	4995	CRON	21	0748.5	0800	67	12.5	2.8		
	4995	MANI	4	0751.1	0759.8	19.4D	199.0	61.0D		WX
	2695	MANI	4	0751.8	0759.8	20 D	117.0	43.3D		
	1415	MANI	3	0752.8	0800.2	17.9D	20.3	11.3D		WX
	8800	MANI	4	0753.5	0759.6	18.9D	175.0	63.0D		
	4995	CANR	3	0753	0758.5	9.5	6.7	2.3		
	2695	CANR	3	0753.5	0758	16	12.4	5.6		
	10500	BERN	3	0754	0800	18	63.0			
	9500	BERL	4	0754.3	0800.1	98	96.0	17.0		
	9400	SLOU		U	0800 U	U	U	U		
	3100	CRIM	3	0754	0800	86	104.0	33.0		
	3000	BERL	4	0754.3	0759.9	83	116.0	15.0		
	2695	CRON	3	0754.5	0801	68.5	10.4	3.5		
	1500	BERL	4	0754.5	0800	13	17.0	5.2		
	950	GORK	22	0754.9	0759.1	10.1	18.0	1.6		
	9750	IRKU	3	0755	0800	20	85.5			
	606	MANI	22	0755.2	0806.1	12.4	5.3	1.8		
	9285	ARCE	3	0756 U	0800.1	9.1U				
	9100	GORK	20	0756.4	0803.5	15.9	40.0	14.7		
	1420	ARCE	22	0756 U	0800	105 U				
	1420	CRON	21	0756	0800	61	1.7	.6		
	1420	CANR	3	0756.5	0800.5	8	1.8	.4		
	9100	GORK	3	0757.7	0759.8	5.8	82.0	17.4		
	9285	ARCE	29	0805.1		85				
	950	GORK	20	0813.1	0815.9	13.9	3.0	1.5		
	9285	ARCE	23	0949.2	1204	213				
	408	TRST	42	0951.7	0955	3.8	100.0			
	210	IZMI	6	0952.6	0953	1.1	450.0	200.0		
	1420	CRON	8	0953.5	0954	1	.5	.1		
	950	GORK	4	0953.9	0954.5	1	30.0	4.5		
	237	TRST	42	0953.3E	0953.7	4 U	2500.0U			
	234	POTS	40	0953.3	0953.4	1.9	800.0	15.0		
	650	GORK	41	0954.5	0954.7	1.5	8.4			
	650	GORK		0954.5	0955.4		75.0			
	4995	CANR	21	1003	1005	8	3.2	.9		
	10500	BERN	3	1004.8U	1005.5U	36	220.0			
	9500	BERL	4	1004.3	1005.7	36 U	288.0	21.0		
	9285	ARCE	4	1004.8	1005.7	6.7				
	7000	SADP	3	1004.7	1005.8	1.7	156.3	77.6		
	37000	SLOU	4	1005.8	1006.4	1	100.0			
	19000	SLOU	4	1005.3	1006	5	258.0			
	9400	SLOU	4	1005	1006	5	416.0			
	9100	GORK	3	1005.1	1006.3U	5.6	160.0D			
	4995	CRON	3	1005	1006	8.5	5.1	.9		
	7000	SADP	29	1006.4		4				
	19000	SLOU	29	1010	1010	15	52.0			
	9400	SLOU	29	1010	1010	25	25.0			
	9285	ARCE	29	1011.5		28.5				
	237	TRST	5	1012	1012.1	.2	350.0	100.0		
	9500	BERL	4	1112.7	1114	6.8	16.0	3.1		
	10500	BERN	3	1113.3	1114	7	12.0			
	9400	SLOU	3	1113.8	1114	2	25.0			
	9285	ARCE	3	1113.5	1114.2	3				

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
25	7000	SAOP		1130						
	9500	BERL	4	1132.6	1136.9	6.2	455.0	118.0		
	4995	CANR	8	1134	1137.	5	44.5	5.6		
	3000	BERL	4	1134	1136.9	43	284.0	42.0		
	2695	CANR	8	1134.5	1136.5	5	40.4	12.7		
	9400	HUAN	3	1135	1136.6	7.1	402.0	84.1		
	3100	CRIM	3	1135	1137	15	17.0	6.0		
	1500	BERL	4	1135.3	1137.5	7.5	278.0	71.0		
	1420	ARCE	4	1135.3	1136.9	3.5				
	1420	CANR	8	1135.5	1138	6	42.9	12.6		
	950	GORK	3	1135.7	1137.6	1.9	69.0	14.0		
	650	GORK	4	1135.5	1137.1U	6.5	80.0D			
	606	SGMR	4	1135.5	1136.9	5.3	310.0	90.0		
	408	TRST	41	1135.6	1137	3	200.0D			
	37000	SLOU	3	1136.9	1137	.5	114.0			
	2 410	SGMR	49	1136.2	1136.9	2.3	5600.0	1600.0		
	19000	SLOU	3	1136.5	1137	1	456.0			
	15400	SGMR	47	1136.5	1136.8	2.8	530.0	150.0		
	10500	BERN	47	1136.2	1136.8	11	800.0			
	9400	SLOU	3	1136	1137	6	1360.0			
	9285	ARCE	3	1136.2	1136.9	6				
	9100	GORK	3	1136.3	1137.3	2.7	250.0D			
	8800	SGMR	47	1136.7	1137.2	2.2	670.0	190.0		
	4995	SGMR	3	1136.2	1137	4.8	360.0	100.0		
	2695	SGMR	3	1136.1	1137	4.4	320.0	90.0		
	1415	SGMR	45	1136.2	1137.1	4.4	325.0	110.0		
	245	SGMR	49	1136.5	1137	1.2	15000.0	4300.0		
	237	TRST	41	1136.5	1137	1.1	2200.0D			
	234	POTS	45	1136.6	1136.9	.8	120000.0D	2000.0D		
	225	HARS	5	1136		1.2	800.0D			
	210	IZMI	48	1136.5	1137	1.1	10000.0	4050.0		
	100	GORK	6	1136.8		1.3	100.0D			
	23	POTS	45	1136.7	1137	.7	25000.0	5000.0		
	200	GORK	6	1137.1	1137.3	.7	2500.0			
	950	GORK	29	1137.9	1139	8.4	2.6	1.3		
	1420	ARCE	29	1138.8		32				
	9500	BERL	46	1159.5	1203.5	51	23.0	3.1		
	9400	SLOU	22	1200	1204	10	33.0			
	2695	SGMR	45	1201.1	1201.2	.9	36.7	7.0		
	1415	SGMR	46	1201.2	1201.8	.7	25.3	6.0		
	606	SGMR	45	1201.2	1201.3	.8	35.9	6.0		
	9400	HUAN	4	1202.8	1204.5	7.1	13.3	5.9		
	650	GORK	40	1212	1257.9	51 D	13.0	2.7		
	237	TRST	41	1251.1	1251.2	.3	440.0D			
	234	POTS	5	1251	1251.1	.1	850.0	300.0		
	1420	CANR	3	1253	1257	7.5	.5	.2		
	23	POTS	45	1253.1	1253.4	.7	12000.0	3000.0		
	237	TRST	5	1301.3	1301.3	.3	360.0	110.0		
	1420	CANR	3	1337	1339	4.5	.3	.1		
	2800	OTTA	24	1345		60	9.9			
	9400	HUAN	22	1409.1	1433.3	31.6	20.0	6.0		
	960	PENN	41	1430.9	1433.8	3.2	59.4			
	10700	PENN	1	1432.5	1433.5	10	7.8	2.5		
	960	PENN	45	1439.6	1444	7.6	162.0	7.8		
	234	POTS	45	1452.1	1452.2	.2	1000.0	250.0		
	2800	OTTA	21	1455	1500	10	2.2	1.1		
	2800	OTTA	8	1456	1456.3	.5	5.2	2.6		
	2700	PENN	1	1456	1456.4	.8	6.7	2.4		
	2695	BOUL	8	1456	1456.5	1	.7	.1		
	9400	HUAN	21	1514	1537.1	91.8	9.5	4.3		
	10700	PENN	3	1531.9	1532.9	4	23.6	3.5		
	15400	SGMR	4	1532.6	1532.7	.5	14.7	3.5		
	9400	HUAN	1	1532.4	1532.7	.7	9.5	3.5		
	8800	SGMR	2	1532.7	1532.8	.6	9.4	2.0		
	9400	HUAN	1	1601.9	1602.3	.6	7.6	4.3		
	960	PENN	20	1621.8	1657.5	109	10.6	2.9		
	9400	HUAN	2	1623.2	1624.8	4.8	11.4	4.8		
	18	MCMA	42	1657	1704	24			2	
	2800	OTTA	2	1739.9	1740.7	1.5	2.4	1.2		
	9400	HUAN	20	1825	1827.4	6	11.4	4.6		
	9400	HUAN	4	1923.6	1925.3	3.6	111.9	39.0		
	10700	PENN	45	1924.8	1925.6	7.5	83.9	12.7		
	8800	SGMR	45	1924.2	1925.3	8.8	175.0	65.0		
	4995	BOUL	45	1924	1925	2.5	5.1	1.2		
	2700	PENN	3	1924.8	1925.5	7.4	21.7	4.4		
	2695	SGMR	45	1924.2	1925.5	9.4	11.8	4.5		
	960	PENN	45	1924.6	1926.6	3.8	77.1	6.4		
	606	SGMR	46	1924.7	1926.5	4.5	105.0	51.0		
	410	SGMR	7	1924.5	1926.5	3.7	330.0	120.0		
	245	SGMR	7	1924.8	1925.8	3.4	410.0	160.0		
	15400	SGMR	45	1925.2	1925.3	4.5	21.8	8.5		
	4995	SGMR	3	1925	1925.4	8.1	41.0	16.2		
	2800	OTTA	3	1925	1925.4	3	13.0	4.2		
	1420	BOUL	45	1925	1926.5	3.5	9.2	3.8		
	1415	SGMR	46	1925	1925.5	8.8	225.0	90.0		
	2800	OTTA	8	1926.2	1926.2		9.2			
	9400	HUAN	29	1927.2	1927.2	12	26.5	9.3		
	9400	HUAN	22	1950.3	1956.3	26.1	15.2	7.3		
	2800	OTTA	40	1953	2003	32	3.8			
	9400	HUAN	3	2156.2	2157.5	1.7	51.2	16.0		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
25	4995	BOUL	8	2156.5	2157.5	3	7.2	1.6		
	3750	TYKW	3	2156.5	2157.8	4	43.0	10.0		
	2695	PENT	4	2156.5	2157.8	3.5	51.0	17.0U		
	9400	TYKW	3	2157	2157.7	3	40.0	12.0		
	2000	TYKW	3	2157	2157.8	3	16.0	5.0		
	1420	BOUL	8	2157	2158.5	3	1.3	.4		
	1000	TYKW	1	2157	2157.9	2	10.0	4.0		
	500	HIRA	6	2157.5	2157.7	.7	20.0	8.0		
	500	HIRA	6	2220	2220.3	1	30.0	10.0		
	9400	TYKW	3	2303	2303.4	2	32.0	9.0		
	9400	TYKW	3	2327	2328	3	45.0	10.0		
	8800	MANI	4	2327.1	2328.2	7.1	65.0	11.2		
	4995	BOUL	45	2327.5	2328	1	4.3	1.0		
	4995	CRON	8	2327	2328.5	2	3.7	1.6		
	4995	MANI	4	2327.1	2328.2	7.1	77.0	12.8		
	3750	TYKW	45	2327	2328	4	72.0	15.0		
	2695	PENT	4	2327	2328	3	62.0	26.0U		SPIKE=144
	2695	CRON	8	2327	2329	6.5	10.8	2.4		
	2695	MANI	4	2327.1	2328.2	7.1	126.0	21.1		
	2000	TYKW	3	2327	2328	7	58.0	12.0		
	1420	CRON	3	2327.5	2329	9.5	2.6	.5		
	1415	MANI	4	2327.1	2328.2	7.1	38.5	7.3		
	1000	TYKW	3	2327	2328.3	8	44.0	10.0		
	606	MANI	4	2327.1	2327.8	7.2	92.0	5.8		
	500	HIRA	6	2327.5	2328	1	30.0	20.0		
	200	HIRA	6	2327	2327.6	2.5	360.0	90.0		
	100	HIRA	6	2327.2	2327.4	1.5	150.0	60.0		
	200	HIRA	6	2340	2340.2	2	820.0	130.0		
26	9400	TYKW	20	0000	0015	80	16.0	8.0U		
	3750	TYKW	20	0000	0015	80	6.0	3.0U		
	208	VORO	24	0020	0042	66	140.0	50.0		
	100	HIRA	43	0027	0057	90	120.0	30.0		
	9750	IRKU	1	0031.6	0032	4	20.3	5.0		
	9400	TYKW	3	0031.5	0032	2.5	31.0	8.0		
	8800	MANI	3	0031.7	0032	1.6	25.8	7.7		
	4995	MANI	3	0031.7	0032.2	1.6	19.4	6.5		
	3750	TYKW	1	0031.5	0032.1	2.5	5.0	2.0		
	4995	CRON	21	0032	0032.5	10	2.3	.4		
	9750	IRKU	1	0159	0159.3	3	15.3	5.0		
	200	HIRA	45	0201	0201.8	3	590.0	170.0		
	9400	TYKW	20	0205	0211	20	8.0	4.0		
	3750	TYKW	20	0205	0430	230	12.0	6.0		
	3750	TYKW	20	0205	0215	25	4.0	2.0		
	2000	TYKW	20	0220	0240	50	2.0	1.0		
	9750	IRKU	20	0230	0239	19	14.5	7.0		
	9400	TYKW	20	0233	0239	15	6.0	3.0		
	3750	TYKW	20	0233	0239	20	6.0	3.0		
	200	HIRA	45	0249	0250.5	3	1000.0	280.0		
	9400	TYKW	20	0300	0435	170	20.0	7.0		
	9750	IRKU	20	0304	0315	19	76.0	11.0		
	9400	TYKW	45	0310	0314.9	10	35.0	5.0		
	8800	MANI	4	0313	0314.9	4	39.6	4.4		
	4995	MANI	1	0313	0314.9	5.5	7.7	1.5		
	2000	TYKW	20	0315	0430	150	4.0	2.0		
	9750	IRKU	20	0340	0350	14	13.2	4.0		
	3750	TYKW	20	0345	0350	10	5.0	2.0		
	1420	CRON	21	0349	0351	8.5	.4	.1		
	100	HIRA	6	0425	0425.2	.6	90.0	20.0		
	4995	MANI	22	0426.5	0436.5	21.2	10.7	3.1		
	8800	MANI	22	0427.3	0435.6	20.4	55.0	22.0		
	100	HIRA	6	0428.9	0429.1	1.3	90.9	20.0		
	100	HIRA	43	0455	0553	90	90.0	35.0		
	200	GORK	44	0530 E		450 D		10.0		
	100	GORK	44	0530 E		108		15.0		
	100	GORK	44	0718		252 D		5.0		
	221	ABST	41	0800	0813	180	11.0			
	410	SGMR	44	1114 E		625 D				
	245	SGMR	44	1114 E		625 D				
	245	BOUL	44	1324 E		610 D				
	9100	GORK	21	0641.1	0657.7	65.8	54.0	26.0	1	
	100	GORK	6	0644.1	0644.3	.7	800.0	200.0		
	9750	IRKU	3	0646	0647	7	670.0			
	9500	BERL	46	0646.3	0647.3	59	1068.0			
	9400	TYKW	3	0646		15	500.0D	90.0U		
	9100	GORK	3	0646.5	0647 U	3.2	260.0D			
	8800	MANI	47	0646.5	0647.2	22.9	1140.0	66.0		
	4995	CRON	8	0646.5	0648	7	19.0	6.1		
	4995	MANI	4	0646.5	0647.2	22.9	220.0	25.3		
	3750	TYKW	3	0646	0647	6	105.0	10.0		
	237	TRST	45	0805	0805.1	.3	110.0D	28.0		
	3100	CRIM	1	0814	0817	13	6.0	2.0		
	9500	BERL	3	0815	0816.5	12	13.0	3.5		
	4995	CRON	21	0815.5	0816.5	18	1.6	.5		
	3000	BERL	2	0815	0816.8	13	7.3	1.4		
	2950	GORK	1	0815.5	0816.7	5.1	6.5	2.6		
	2695	CRON	3	0815	0817	7	.6	.2		
	2695	CANR	3	0815	0816.5	8	.9	.3		
	9500	BERL	2	0828.3	0828.7	1.6	10.0	3.5		
	3000	BERL	40	0905	0924.2	22	7.3	1.4		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
26	9500	BERL	22	0907	0912.3	23	13.0			
	4995	CANR	3	0910	0912	3.5	.5	.2		
	9100	GORK	1	0911.2	0912.2	2.2	12.3	6.1		
	408	TRST	41	0911.1	0911.8	1.7	870.0			
	4995	CANR	3	0913	0915.5	29.5	2.1	.6		
	1500	BERL	40	0915	0924.5	14	3.9	1.2		
	930	BORD	5	0920	0920	1	7.0	1.0		
	4995	CANR	3	0923	0924	2.5	.5	.2		
	2695	CANR	3	0923	0924	2.5	.6	.2		
	1420	CANR	3	0924.5	0925	1	.4	.1		
	930	BORD	5	0930	0930.7	1	38.0	1.0		
	408	TRST	45	0932.8	0932.9	.4	140.0	28.0		
	40	POTS	5	0932	0932.1	.1	2000.0U	700.0U		
	1420	CANR	45	0954	0954.5	2	.9	.3		
	4995	CANR	45	0955	0957.5	8	.5	.2		
	950	GORK	20	0955.3	0958.7	6.8	4.1	2.0		
	408	TRST	41	0955.7	0957.3	3.7	120.0D			
	237	TRST	41	0957.2	0957.3	.4	130.0D			
	950	GORK	20	1009.8	1011.5	5.2	2.0	1.0		
	3000	BERL	20	1016	1024	55	7.3			
	2695	CANR	3	1018.5	1024	7.5	.5	.1		
	1500	BERL	20	1018.5	1024	54	3.3			
	1420	CANR	3	1019.5	1024.5	8	.3	.1		
	9500	BERL	20	1021.8	1049.8	34	6.6			
	950	GORK	46	1053.6	1053.9	3.3	54.0			
	950	GORK		1053.6	1054.8		54.0D			
	950	GORK		1053.6	1055.7		90.0			
	23	POTS	40	1110.7	1115.8	22	30000.0	1500.0		
	9500	BERL	22	1112.5	1117.4	24	15.0			
	100	GORK	41	1114.7	1116.3	23.6	100.0D			
	100	GORK		1114.7	1131.2		100.0D			
	408	TRST	41	1115.7	1116	1	100.0D			
	237	TRST	41	1115.6	1115.8	.5	320.0D			
	234	POTS	5	1115.8	1115.8	.1	700.0	250.0		
	210	IZMI	6	1115.8	1116.2	.8	330.0	150.0		
	23	POTS	5	1131.9	1132	.5	6000.0	2000.0		
	23	POTS	40	1146.3	1157.2	41	25000.0	500.0		
	9500	BERL	21	1220	1322.5	140	16.0			
	245	SGMR	6	1247.1	1251.2	17.9	150.0	50.0		
	410	SGMR	48	1250.2	1254.4	17.5	550.0	220.0		
	15400	SGMR	46	1252.7	1254.3	7.3	190.0	78.0		
	9400	HUAN	45	1252.7	1254.4	3.2	372.1	141.1		
	8800	SGMR	47	1252.8	1254.4	6.7	565.0	230.0		
	7000	SAOP	46	1252.9	1255.8	3.6	229.8			
	4995	CANR	45	1252	1254.5	8	11.7	2.3		
	3000	BERL	21	1252.5	1358	78	8.7			
	10700	PENN	45	1253.1	1254.4	3.1	244.0	95.6		
	10500	BERN	46	1253.3	1254.4	16	238.0			
	10500	BERN		1253.3	1254.8		123.0			
	10500	BERN		1253.3	1255.1		116.0			
	10500	BERN		1253.3	1255.6		150.0			
	10500	BERN		1253.3	1330.6		46.0			
	9500	BERL	4	1253	1254.2	15	296.0			
	9400	SLOU	4	1253	1254	8	457.0			
	9285	ARCE	46	1253.3	1254.4	3.2				
	9285	ARCE		1253.3	1254.4	2.2				
	9100	GORK	46	1253.8	1254.6	3.5	310.0D			
	9100	GORK		1253.8	1255.8		186.0			
	4995	SGMR	46	1253.1	1254.5	5.9	170.0	55.0		
	3000	BERL	4	1253.5	1254.5	6	71.0			
	2950	GORK	4	1253.2	1254.4	4	80.0	28.0		
	2800	OTTA	4	1253.5	1254.3	2.5	75.0	37.0		
	2700	PENN	45	1253.4	1254.4	2.8	117.0	48.9		
	2695	SGMR	46	1253.1	1254.5	6.5	69.0	24.0		
	2695	CANR	45	1253	1255	8.5	7.4	3.3		
	1500	BERL	4	1253.5	1254	8.5	95.0	16.0		
	1420	ARCE	45	1253.8	1255	5.4				
	1420	ARCE		1253.8	1255	1.7				
	1420	CANR	45	1253.5	1255.5	7.5	12.2	3.8		
	1415	SGMR	46	1253.4	1254.9	6.6	125.0	47.0		
	960	PENN	45	1253.6	1255.7	2.6	100.0	40.8		
	606	SGMR	46	1253.2	1254.3	6.8	310.0	120.0		
	19000	SLOU	4	1254	1254.2	2	94.0			
	237	TRST	41	1254.2	1254.5	1	130.0D			
	9400	HUAN	29	1255.9	1255.9	15.9	48.0	13.9		
	9285	ARCE		1255.5	1255.6	1				
	1420	ARCE		1255.5	1255.7	3.7				
	10700	PENN	29	1256.2	1256.2	19.5	37.5	10.2		
	9285	ARCE	29	1256.5		13.5				
	7000	SAOP	29	1256.5		10				
	2800	OTTA	29	1256		18	7.2	2.4		
	2700	PENN	29	1256.2	1256.2	19.7	13.7	6.9		
	960	PENN	29	1256.2	1256.2	17.9	7.7	3.9		
	8800	SGMR	29	1259.5	1259.5	25.6	20.1	9.9		
	4995	SGMR	29	1259	1259	28.3	12.3	6.1		
	2695	SGMR	29	1259.6	1259.6	25.7	3.8	1.9		
	15400	SGMR	29	1300	1300	11.6	5.7	2.8		
	1415	SGMR	29	1300	1300	26	2.9	1.4		
	606	SGMR	29	1300	1300	28	3.9	1.9		
	930	BORD	45	1317	1317.3	1	20.0	2.0		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
26	9400	HUAN	28	1320.5	1328.6	8.1	26.9	8.2		
	9285	ARCE	23	1320.6	1330.6	45				
	8800	SGMR	46	1325.1	1332	12.9	265.0	106.0		
	2695	SGMR	46	1325.3	1332.1	11.5	39.0	15.8		
	10500	BERN	46	1326.1	1331.9	28	47.0			
	10500	BERN		1326.1	1332		92.0			
	10500	BERN		1326.1	1332		67.0			
	9500	BERL	46	1326	1332	26	97.0			
	4995	CANR	45	1326.5	1331	29.5	3.5	.6		
	2700	PENN	45	1326.8	1332.1	9.4	65.2	26.8		
	1415	SGMR	46	1326	1332.1	9.4	83.2	32.2		
	15400	SGMR	22	1327.1	1332	17.6	31.5	12.2		
	10700	PENN	45	1327	1332	9.2	110.0	32.0		
	9400	SLOU	46	1327	1332	15	177.0			
	7000	SAOP	23	1327.6		17.8	90.0			
	7000	SAOP	22	1327.6		17.8	57.5			
	4995	SGMR	46	1327.3	1332.2	10.2	60.3	24.0		
	2695	CANR	45	1327.5	1332.5	33	4.0	1.4		
	1500	BERL	46	1327.8	1331.8	37	44.0	5.1		
	245	SGMR	6	1327.2	1328.5	8.4	75.0	30.0		
	237	TRST	42	1327.5	1331.9	4.6	180.0			
	19000	SLOU	20	1328.5	1332	7	44.0			
	9400	HUAN	3	1328.6	1330.4	7.3	72.9	45.8		
	3000	BERL	46	1328	1332.2	25	37.0			
	1420	ARCE	40	1328	1331.3	13				
	1420	CANR	45	1328.5	1332.5	22.5	5.5	1.8		
	960	PENN	45	1328.4	1332	7.6	350.0D	19.5		
	930	BORD	45	1328	1332	8	340.0	8.0		
	606	SGMR	46	1328	1331.9	8.4	134.0	52.2		
	410	SGMR	7	1328	1328.6	7	295.0	122.0		
	9400	HUAN	8	1331.9	1332	.4	84.4	35.2		
	9285	ARCE	8	1331.8	1332	.5				
	234	POTS	5	1331.9	1331.9		250.0	80.0		
	7000	SAOP	4	1332	1332.2	.8	42.1	14.5		
	2800	OTTA		1332 E	1332	.6 D	39.0			
	9400	HUAN	4	1333.3	1333.7	2.5	32.6	16.6		
	9400	HUAN	30	1335.9	1335.9	18.6	23.0	7.2		
	1415	SGMR	29	1335.4	1335.4	10.2	4.8	2.4		
	10700	PENN	29	1336.2	1336.2	13.4	19.1	9.5		
	2700	PENN	29	1336.2	1336.2	152	24.0	12.0		
	2695	SGMR	29	1336.8	1336.8	33.1	13.3	6.7		
	4995	SGMR	29	1337.5	1337.5	33.3	17.6	8.8		
	8800	SGMR	29	1338	1338	19.4	24.2	12.1		
	2800	OTTA	29	1338		35	9.8	4.8		
	237	TRST	41	1502.5	1502.8	.7	80.0			
	9400	HUAN	22	1620.6	1702.1	92.7	9.6	2.8		
	2800	OTTA	20	1630	1650	40	1.8	0.9		
	2800	OTTA	22	1800	1905	115	6.4	3.2		
	9400	HUAN	20	1817.8	1843.1	73.3	17.3	9.6		
	18	MCMA	42	1838	1843	6			1	
	2800	OTTA	26	2020		60	5.0			
	100	HIRA	45	2136	2143.2U	14	200.0U	50.0U		
	9400	HUAN	20	2142.9	2145.8	10.3	13.4	4.7		
	2695	PENT	22	2142.8	2143.2	10	2.4	1.2U		
	500	HIRA	6	2143	2145	7.5	25.0	5.0		
	200	HIRA	6	2144		6.5				
	2695	PENT	24	2228		5	3.0	U		
	208	VORO	24	2313	2324	27	74.0	22.0		
27	8800	MANI	3	0000.9	0001.3	2.8	14.9	4.3		
	4995	CRON	45	0000	0001	4	2.1	.7		
	4995	MANI	3	0000.7	0001.2	3.8	21.1	9.7		
	2695	CRON	3	0000	0000.5	3	1.0	.4		
	2695	MANI	1	0000.9	0001.3	3.9	8.5	3.6		
	1420	CRON	3	0000.5	0002.5	4	.9	.3		
	606	MANI	4	0000.6	0001.4	4.3	12.4	5.3		
	1415	MANI	1	0001	0002	3.8	3.2	1.1		
	100	HIRA	6	0001 U	0001.2U	2 D	210.0U	90.0U		
	9750	IRKU	1	0236	0236.4	3	11.6	4.3		
	3750	TYKW	20	0240	0330	170	4.0	2.0		
	9750	IRKU		0309.2	0310		113.0			
	9750	IRKU	41	0309.2	0312.2	5	23.6	12.6		
	9400	TYKW	45	0309	0309.9	5	110.0	15.0		
	8800	MANI	4	0309.3	0310	3.7	127.0	25.8		
	4995	CRON	8	0309	0310	6.5	7.1	1.9		
	4995	MANI	4	0309.3	0310	4.1	94.0	16.8		
	3750	TYKW	3	0309	0309.9	3	46.0	10.0		
	2695	MANI	3	0309.3	0310.2	4.1	23.4	6.2		
	2695	CRON	8	0309	0309.5	2.5	2.4	1.0		
	2000	TYKW	3	0309	0310	6	21.0	5.0		
	1420	CRON	8	0309	0311	3	2.5	1.1		
	1415	MANI	4	0309.5	0310.2	2.9	36.0	9.8		
	1000	TYKW	3	0309	0310	3	165.0	20.0		
	606	MANI	4	0309.5	0310.3	2.9	40.6	7.0		
	500	HIRA	6	0309.7	0310	2	50.0	20.0		
	200	HIRA	6	0309	0310	1.5	860.0	150.0		
	100	HIRA	6	0309	0310.1	3	230.0	80.0		
	9400	TYKW	20	0319	0324	15	4.0	2.0		
	9750	IRKU	20	0420	0427	14	12.0	6.0		
	2695	CRON	3	0423	0426	4.5	.3	.1		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
27	4995	CRON	3	0425	0427	5	.5	.2		
	200	GORK	44	0500 E		480 D		10.0		
	100	GORK	44	0500 E		480 D		5.0		
	221	ABST	41	0700	1040	240	8.0			
	410	SGMR	44	1116 E	2027.5	622 D	50.0			
	245	SGMR	44	1116 E	1954.2	622 D	204.0			
	245	BOUL	44	1326 E		611 D			2	
	100	HIRA	44	2100	2332	300 D	160.0	60.0		
	208	VORO	44	2200	2215	240	92.0	28.0		
	9400	TYKW	3	0502	0504.1	6	22.0	5.0		
	9750	IRKU	20	0503.5	0504	6.5	27.3	7.5		
	210	IZMI	41	0724.5	1131.8	7.5	70.0			
	9500	BERL	20	0833 U	0910.2	107	20.0			
	1500	BERL	20	0841.5	0852.5	14	6.2	2.3		
	3000	BERL	20	0843	0851	77	6.3			
	4995	CRON	3	0850	0851	4.5	.7	.3		
	210	IZMI	6	0931.9	0932.4	.6	75.0	40.0		
	408	TRST	45	1001.8	1001.9	.4	71.0	17.0		
	210	IZMI	41	1002	1003.5	2	100.0			
	408	TRST	42	1038.1	1039.5	6.2	54.0			
	234	POTS	40	1038.4	1039.2	.6	350.0	10.0		
	225	HARS	45	1038.5	1039	1.5	260.0	90.0		
	237	TRST	42	1039.1	1040	2.7	620.0U			
	210	IZMI	6	1039.4	1040.5	1.1	100.0	50.0		
	200	GORK	6	1039.3	1039.7	1.3	100.0	50.0		
	100	GORK	6	1039	1040.4	2.5	200.0	100.0		
	950	GORK	1	1044.2	1044.3	.3	3.0	1.5		
	930	BORD	5	1044	1044.2	1	17.0	2.0		
	9500	BERL	22	1103.5	1110.9	16	11.0			
	237	TRST	42	1103.1	1104.7	2	84.0			
	3000	BERL	20	1111.2	1114	19	2.9			
	210	IZMI	41	1138	1146.1	22	100.0			
	2700	PENN	3	1217.8	1226.6	11.7	13.9	5.9		
	4995	CANR	3	1223.5	1225.5	5	1.1	.3		
	930	BORD	45	1223	1226.5	6	9.0	3.0		
	606	SGMR	4	1223.5	1225.5	8.4	26.9	10.1		
	4995	SGMR	3	1224.8	1226.5	4.2	16.6	8.2		
	3000	BERL	4	1224.5	1226.4	6.3	7.3	2.9		
	2695	CANR	3	1224	1226.5	4.5	.8	.3		
	2695	SGMR	1	1224.3	1226.5	5	6.8	3.4		
	1500	BERL	4	1224.5	1225.7	4.5	8.0	1.7		
	410	SGMR	48	1224.6	1225.5	4.9	1100.0	410.0		
	408	TRST	41	1224.7	1225.7	2	3400.0			
	225	HARS	5	1224.5	1225	1	300.0	120.0		
	9500	BERL	4	1225	1225.7	3	8.3	1.7		
	9285	ARCE	1	1225.2	1226.4	3				
	9100	GORK	2	1225.6	1226	1.1	12.4	6.0		
	8800	SGMR	3	1225	1225.6	3.2	12.3	6.3		
	2950	GORK	2	1225.7	1226.5	1.7	6.8			
	1420	ARCE	3	1225.3	1226	4				
	1420	CANR	45	1225	1226.5	6.5	.9	.3		
	1415	SGMR	4	1225.3	1225.9	3.9	12.8	5.0		
	960	PENN	1	1225	1226.7		6.6			
	950	GORK	3	1225.5	1226	2.2	4.5	2.0		
	650	GORK	3	1225.7	1225.8	.3	9.4			
	245	SGMR	7	1225	1225.5	1.3	460.0	160.0		
	237	TRST	41	1225.3	1225.7	.9	360.0D			
	234	POTS	45	1225.6	1225.7	.5	2200.0	250.0		
	225	HARS	45	1236	1237	1.5	250.0	80.0		
	9400	HUAN	20	1316.2	1325.8	15.6	11.2	4.4		
	9400	HUAN	1	1340.7	1341.9	4.4	14.9	3.4		
	15400	SGMR	3	1341.8	1342.1	7.1	46.7	18.2		
	10500	BERN	3	1341.9	1342.2	3	20.0			
	10700	PENN	3	1342.1	1342.3	3.8	22.9	4.6		
	8800	SGMR	40	1342	1345.2	8.5	14.8	7.0		
	2800	OTTA	24	1350		25	5.0			
	9400	HUAN	20	1401.7	1423	61.4	13.0	4.7		
	225	HARS	45	1401.5	1403	2.5	200.0	40.0		
	2700	PENN	20	1406.8	1416.8	91.4	7.1	3.5		
	10700	PENN	20	1407.4	1423.2	22.4	15.3	4.4		
	7000	SAOP	3	1422.9	1423.2	3.2	13.6	7.2		
	2800	OTTA	1	1445.5	1445.8	1	1.6	0.8		
	10700	PENN	1	1446.7	1451	6.6	5.6	2.1		
	9400	HUAN	20	1506.7	1511.6	35.2	11.2	4.0		
	9400	HUAN	21	1546.8	1604.6	31.3	11.2	4.0		
	2800	OTTA	23	1550	1625	140	6.0	2.8		
	15400	SGMR	3	1613.6	1613.8	.6	10.2	3.0		
	10700	PENN	3	1613.6	1613.9	2.9	22.2	6.0		
	9400	HUAN	1	1613.4	1613.9	1	20.5	7.3		
	8800	SGMR	4	1613.7	1613.9	1.9	18.0	4.0		
	4995	SGMR	20	1613	1624	24.2	12.0	4.0		
	2695	SGMR	20	1614.4	1624.9	25.2	4.1	2.0		
	2700	PENN	20	1618.1	1623.6	29.3	9.0	4.5		
	4995	SGMR	22	1706.9	1714.3	17.1	9.8	2.5		
	1415	SGMR	40	1706.2	1709.5	7.9	3.5	.9		
	8800	SGMR	22	1707.2	1713.4	13.2	10.0	2.5		
	2800	OTTA	40	1707	1710.7	6	5.8			
	2695	SGMR	40	1707	1710.6	12.5	6.0	1.5		
	9400	HUAN	22	1740.6	1752.7	26.4	16.8	4.4		
	8800	SGMR	22	1741.8	1753.2	60.2U	17.0	8.0U		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
27	4995	SGMR	22	1742	1754.5	60 U	16.1	7.0U		
	15400	SGMR	22	1752	1757.4	53 U	9.5	4.0U		
	960	PENN	40	1826.6		153				
	9400	HUAN	20	1837.7	1855.5	42.7	29.8	12.3		
	8800	SGMR	22	1842.4	1855.8	70.7	25.0	5.0		
	4995	SGMR	46	1842.4	1848.8	70.6U	30.0	6.0		
	2700	PENN	20	1842	1848	95.5	26.1	12.9		
	2695	SGMR	22	1842.8	1855.7	70.2	15.0	4.0		
	2800	OTTA	21	1844	1856	95	14.2	7.0		
	1415	SGMR	22	1844.6	1909.2	68.4	7.5	2.5		
	606	SGMR	22	1844.6	1859.3	88.4	16.0	5.0		
	15400	SGMR	22	1845.7	1855.3	31.7	13.0	3.3		
	10700	PENN	20	1845.3	1856	143	18.4	9.2		
	2800	OTTA	1	1847.5	1847.8	1	3.8	1.9		
	1420	BOUL	3	1909	1909.5	2.5	.5	.1		
	9400	HUAN	20	1925.6	1938.3	27.7	9.3	3.4		
	9400	HUAN	45	1955.9	1957.3	4.7	96.8	22.3		
	4995	BOUL	8	1956	1958.5	3	14.2	6.2		
	15400	SGMR	4	1957.2	1957.5	.9	41.0	10.0		
	10700	PENN	3	1957.4	1957.6	2	63.1	7.0		
	8800	SGMR	3	1957.3	1957.5	2.2	115.0	20.0		
	4995	SGMR	3	1957.3	1957.6	1.5	115.0	40.0		
	2800	OTTA	1	1957	1957.5	1.5	8.2	2.1		
	2695	SGMR	1	1957.3	1957.5	.4	6.0	2.5		
	2700	PENN	3	1958.5	1958.6	.5	15.3	6.1		
	2800	OTTA	20	2040	2045	65	8.8	2.6		
	9400	HUAN	28	2041.6	2049.4	7.8	18.6	7.4		
	8800	SGMR	1	2042.9	2043.9	1.6	9.0	2.5		
	4995	SGMR	3	2042.9	2043.7	1.4	11.3	3.0		
	2700	PENN	20	2042.5	2045.7	23.7	10.7	5.3		
	2695	SGMR	1	2042.8	2043.7	2.1	6.0	2.0		
	1415	SGMR	40	2042.8	2044.3	4.7	4.8	1.6		
	606	SGMR	4	2042.7	2044.1	6.6	19.0	5.0		
	410	SGMR	6	2042.8	2045.3	3.3	85.0	20.0		
	15400	SGMR	3	2043.3	2043.7	1.6	14.2	3.0		
	15400	SGMR	3	2043.3	2043.7	1.6	14.2	3.0		
	960	PENN	45	2043.4	2044.5	1.4	6.4	1.0		
	1420	BOUL	45	2044	2045	3.5	.3	.1		
	10700	PENN	3	2047.8	2050.3	17.9	54.2	11.1		
	9400	HUAN	3	2049.4	2050.2	3.4	80.1	38.0		
	8800	SGMR	4	2049.9	2050.3	1.8	115.0	29.0		
	15400	SGMR	4	2050	2050.1	.5	22.4	5.0		
	4995	SGMR	46	2050	2052.2	3	14.2	3.5		
	2695	SGMR	2	2051.7	2052.2	1.3	9.0	3.5		
	1415	SGMR	1	2051.7	2052.3	1.6	3.4	1.0		
	9400	HUAN	29	2052.8	2052.8	14.6	24.2	13.6		
	4995	CRON	3	2200	2202	4.5	1.6	.5		
	9400	TYKW	3	2230	2232	5	17.0	7.0		
	3750	TYKW	1	2230	2232	5	5.0	2.0		
	4995	BOUL	3	2240.5	2242	3.5	1.7	.7		
28	3750	TYKW	3	0005	0018	145	9.0	5.0		
	2000	TYKW	3	0010	0018	50	4.0	2.0		
	9400	TYKW	3	0022.5	0024	2.5	17.0	8.0		
	8800	MANI	3	0022.5	0023.9	3.5	15.0	2.1		
	4995	MANI	3	0022.5	0023.7	3.3	18.8	5.1		
	3750	TYKW	3	0022.5	0023.9	2.5	13.0	7.0		
	4995	CRON	21	0023	0024	16	2.6	.6		
	9400	TYKW	29	0025		25	6.0	3.0		
	3750	TYKW	29	0025		20	5.0	3.0		
	9750	IRKU	20	0206	0210	12	9.4	6.0		
	9750	IRKU	1	0236.6	0237.4	.5	8.4	3.0		
	9400	TYKW	45	0300	0323	50	16.0	4.0		
	9750	IRKU	1	0321	0322.8	3.5	19.0	6.0		
	9750	IRKU	1	0331	0332.7	10	22.0	6.3		
	3750	TYKW	45	0353	0434.7	60	13.0	5.0		
	9750	IRKU	1	0354	0354.8	1.5	8.4	1.7		
	4995	CRON	3	0354	0355	2	.9	.3		
	9750	IRKU	41	0413.8	0414.2	15	98.0	17.0		
	9750	IRKU		0413.8	0420.9		49.0			
	8800	MANI	46	0413.8	0414.3	25.7	85.0	24.4		
	4995	MANI	46	0413.8	0422	32.7	32.6	12.7		
	4995	CRON	8	0414	0414.5	3	2.1	.8		
	4995	CRON	21	0415	0417	10.5	1.8	.4		
	2695	CRON	45	0418.5	0420	11	.8	.2		
	9400	TYKW	45	0420	0420.9	30	35.0	5.0		
	2695	MANI	20	0420	0421.8	19.5	6.4	1.3		
	2000	TYKW	45	0433.5	0435.5	2.5	74.0	17.0		
	1420	CRON	8	0433.5	0435.5	2.5	1.4	.5		
	4995	CRON	3	0434	0435	3.5	.9	.3		
	1415	MANI	1	0434.5	0435.6	2	6.4	2.1		
	200	GORK	44	0457		420 D		5.0		
	100	GORK	44	0457 E		423 D		5.0		
	410	SGMR	44	1117 E	1809.4	619 D	14.0			
	245	SGMR	44	1117 E	1804.5	619 D	12700.0			
	234	POTS	45	1136 U	1241	204 D	40.0			
	245	BOUL	44	1327 E		140 D			2	
	100	HIRA	44	2100	2330	506 D	17.0	10.0		
	1420	CRON	45	0500	0504.5	10	1.1	.3		
	100	HIRA	45	0500 U	0506.3U	8.5D	60.0U	25.0U		

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OCT 1972	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
28	9750 IRKU	20	0501	0507.5	9	15.0	5.6		
	9400 TYKW	45	0501	0507.2	20	30.0	8.0		
	4995 CRON	45	0501.5	0506 '	14	4.0	1.8		
	3750 TYKW	45	0501	0507.2	20	36.0	9.0		
	8800 MANI	4	0502.9	0507.2	8	26.8	9.8		
	4995 MANI	4	0502.9	0507.3	8	38.0	12.7		
	2695 CRON	45	0502.5	0504	13	2.2	.8		
	2695 MANI	4	0502.9U	0507.1U	8 U	12.8U	6.4U		
	2000 TYKW	45	0502	0507	10	29.0	6.0		
	1415 MANI	2	0502.9	0507.4	6.2	3.2	1.1		
	1000 TYKW	1	0502	0504	7	2.0	1.0		
	9100 GORK	20	0503.5	0507.4	7.9	30.0	15.0		
	200 GORK	6	0544.2	0544.5	1.6	110.0			
	9750 IRKU	20	0600	0603	12	21.0	5.7		
	4995 CRON	21	0600	0602.5	12.5	.9	.2		
	1420 CRON	45	0612	0618	6.5	2.8	.6		
	1415 MANI	40	0613.7	0616.9	5.9	39.2	5.3		
	950 GORK	2	0615.7	0616.7	1.2	6.4			
	200 GORK	41	0628.9	0639	17.7	160.0			
	200 GORK		0628.9	0644.5		160.0			
	9750 IRKU	20	0634	0641	14	23.6	7.5		
	9100 GORK	20	0640.4	0643.3	11.4	21.0	10.4		
	1420 CRON	3	0644.5	0645	3.5	.5	.1		
	950 GORK	2	0644.8	0644.9	2.8	4.0			
	650 GORK	46	0644.8	0644.9	2.3	16.0			
	650 GORK		0644.8	0645.7		18.0			
	606 MANI	40	0644.3	0645.6	4.7	32.0	6.4		
	500 HIRA	6	0644.8	0645	1.5	120.0	20.0		
	100 HIRA	45	0644	0644.6U	4	160.0U	40.0U		
	100 GORK	41	0644.5	0645	2.8	200.0D			
	100 GORK		0644.5	0647.1		80.0			
	234 POTS	40	0645.5	0646	.8	700.0	35.0		
	23 POTS	45	0645.5	0645.7	1.1	6000.0	600.0		
	100 HIRA	6	0653.5	0654.2	1.5	50.0	20.0		
	9750 IRKU	20	0714	0716.7	13	14.0	5.0		
	237 TRST	42	0749.1	0752.1	3.2	110.0			
	4995 CANR	3	0816	0818	4.5	1.1	.4		
	4995 CRON	3	0818.5	0819.5	2.5	1.2	.5		
	3100 CRIM	3	0915	0927	30	10.0	3.0		
	4995 CANR	3	0919	0925.5	11.5	1.1	.4		
	2950 GORK	20	0919.2	0926.2	32.8	13.4	6.5		
	9500 BERL	21	0923	0951.5	117	17.0			
	3000 BERL	20	0923	0927.4	72	8.5			
	9100 GORK	1	0925.8	0927.6	2.1	7.5	3.7		
	1500 BERL	20	0925	0935.5	63	2.9			
	4995 CANR	3	0934.5	0935.5	2	.5	.2		
	2950 GORK	20	1012.8	1014.6	9.8	5.8	2.3		
	930 BORD	5	1013	1013.4	1	18.0	1.0		
	9500 BERL	4	1014.7	1015.9	5.3	75.0			
	4995 CANR	8	1014.5	1015	1.5	1.7	.7		
	10500 BERN	46	1015.6	1015.9	3	53.0			
	10500 BERN		1015.6	1015.9		43.0			
	9400 SLOU	3	1015.8	1016	3	96.0			
	9285 ARCE	3	1015.7	1016	1				
	9100 GORK	3	1015.5	1016	2.8	84.0	42.0		
	9285 ARCE	29	1016.7		16.4				
	9285 ARCE	21	1035.8	1036.7	7				
	9285 ARCE	8	1038.3	1038.4	.7				
	4995 CANR	3	1129.5	1133	7	.5	.2		
	3000 BERL	20	1129.5	1235.2	151 D	12.0			
	9500 BERL	20	1130	1236	150 D	13.0			
	3100 CRIM	24	1130	1257		13.0			
	1500 BERL	20	1130	1202.5	150 D	7.5			
	4995 CANR	45	1151	1152.5	3.5	.6	.2		
	9400 HUAN	20	1214.2	1346.9	103.5	11.3	8.3		
	15400 SGMR	4	1215.3	1217.1	3.1	48.0	12.0		
	8800 SGMR	4	1215.4	1217.2	3.1	42.0	10.5		
	4995 SGMR	4	1215.4	1217.2	3.1	31.0	8.0		
	2695 SGMR	4	1215.3	1217.2	3.2	21.0	5.2		
	1415 SGMR	4	1215.4	1217.3	3.2	10.0	2.5		
	606 SGMR	2	1215.7	1217.2	2.7	7.0	1.7		
	7000 SAOP	3	1226	1227	41	39.6	15.1		
	2800 OTTA	20	1252	1255	13	4.0	2.0		
	4995 CANR	3	1253	1254.5	3.5	.5	.1		
	225 HARS	45	1258.5	1259.5	2	220.0	40.0		
	9400 HUAN	20	1412.8	1416.1	7.9	7.5	3.8		
	10700 PENN	3	1455.4	1505.6		93.6			
	9400 HUAN	1	1455.5	1455.8	1.3	11.3	6.0		
	9285 ARCE	4	1503.2U	1505.5	5.5U				
	9400 HUAN	3	1504.6	1505.4	4.7	80.0	22.7		
	4995 BOUL	3	1504.5	1505.5	3.5	2.9	1.1		
	4995 CANR	8	1504	1505	6	1.8	.7		
	15400 SGMR	3	1505.2	1505.5	5.1	40.0	20.0		
	10500 BERN	3	1505.1	1505.5	6	39.0			
	9400 SLOU	3	1505	1505.5	4	80.0			
	8800 SGMR	3	1505	1505.5	7.4	120.0	50.0		
	7000 SAOP	4	1505.2	1505.8	5.4	63.0	21.7		
	4995 SGMR	3	1505.3	1505.7	3.9	34.0	17.0		
	9400 HUAN	22	1540.3	1545.2	7	18.6	6.5		
	2800 OTTA	22	1540	1627	110	8.4	4.2		

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OCTOBER 1972

OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	2700	PENN	20	1615.5	1627.2	34.2	12.1	6.1		
	9400	HUAN	20	1616.9	1626.2	13.6	9.3	5.5		
	245	BOUL	41	1708	1709	6			1	
	4995	BOUL	3	1712.5	1716.5	9.5	2.0	.5		
	18	BOUL	41	1713	1715	6			2	
	18	MCMA	6	1736	1738	3			1	
	18	BOUL	41	1740	1745	8			2	
	4995	BOUL	8	1755	1756	2	1.7	.4		
	245	BOUL	42	1759	1809	100			2	
	2800	OTTA	22	1800	1845	80	5.2	2.6		
	1420	BOUL	3	1800.5	1801.5	2.5	.3	.1		
	1420	BOUL	3	1824.5	1827	9	.2	.1		
	9400	HUAN	20	1827.1	1847.4	49.1	11.3	6.0		
	1420	BOUL	45	1912.5	1913.5	1.5	.9	.2		
	18	BOUL	6	1918	1919	5			2	
	2800	OTTA	21	1930	1955	75	3.6	1.8		
	4995	BOUL	3	1937.5	1939	2.5	1.1	.3		
	9400	HUAN	20	1938	1955	33.9	7.5	3.6		
	2800	OTTA	1	1938.5	1939.5	4	1.4	0.7		
	100	HIRA	6	2236	2237	1.8	50.0	30.0		
	100	HIRA	6	2258.5	2258.8	1	50.0	20.0		
	100	HIRA	6	2331.1	2331.5	.9	40.0	25.0		
29	208	VORO	41	0030	0040	19	16.0	14.0		
	200	HIRA	41	0031	0041	18	4500.0			
	8800	MANI	4	0033.7	0039.9	12.7	62.0	18.2		
	4995	MANI	4	0034.5	0039.9	13.5	64.0	18.8		
	2695	MANI	4	0034.3	0039.6	13.4	51.0	11.8		
	1415	MANI	4	0034.5	0039.4	11.8	78.0	12.7		
	606	MANI	40	0034.3	0040.6	13.3	630.0	75.0		
	2695	CRON	45	0035	0039	8.5	3.6	1.1		
	2000	TYKW	45	0036	0039.4	14	70.0	11.0		
	1420	CRON	45	0036	0040	10	5.7	1.3		
	1000	TYKW	45	0036.5	0040.6	24	93.0	9.0		
	9750	IRKU	20	0037	0039.7	8	36.0	8.4		
	9400	TYKW	45	0037	0039.7	6	34.0	13.0		
	4995	CRON	45	0037.5	0039.5	5	2.8	.7		
	3750	TYKW	45	0037	0039.8	25	48.0	7.0		
	500	HIRA	6	0037	0038	5	95.0	20.0		
	100	HIRA	6	0039.2	0040.2	2.3	150.0	60.0		
	9400	TYKW	29	0043		25	6.0	3.0		
	1420	CRON	3	0046	0049.5	2	.3	.1		
	2695	CRON	3	0048	0049	1.5	.4	.2		
	100	HIRA	6	0048.5	0048.8	1	55.0	20.0		
	100	HIRA	6	0103	0103.4	1	80.0	30.0		
	208	VORO	24	0129	0130	14	20.0	14.0		
	100	HIRA	6	0130.7	0131.4	1.8	45.0	25.0		
	9750	IRKU	3	0221	0223	5	22.6	7.0		
	4995	CRON	45	0221.5	0223	4	2.3	.4		
	2695	CRON	45	0221.5	0222.5	5.5	.9	.3		
	9400	TYKW	45	0222	0222.9	4	17.0	6.0		
	8800	MANI	4	0222.5	0223	3.5	21.2	4.7		
	4995	MANI	4	0222.2	0223	4	22.8	3.8		
	3750	TYKW	45	0222	0222.9	4	10.0	3.0		
	2695	MANI	2	0222.2	0222.9	3.2	9.7	2.8		
	2000	TYKW	1	0222	0223	4	9.0	3.0		
	1420	CRON	45	0222.5	0223.5	4.5	.7	.2		
	1415	MANI	2	0222.5	0223	2.9	6.4	1.1		
	1000	TYKW	1	0222	0223	4	5.0	2.0		
	606	MANI	40	0222.4	0225.4	5.8	23.2	4.3		
	500	HIRA	6	0222.7	0222.9	.5	55.0	25.0		
	100	HIRA	45	0228.5	0229.2	3	120.0	50.0		
	3750	TYKW	45	0235	0301	120	30.0	9.0		
	9750	IRKU	20	0236	0237.8	7	17.0	4.6		
	9400	TYKW	45	0236	0301	120	44.0	15.0		
	2000	TYKW	45	0236	0301	80	9.0	3.0		
	200	HIRA	6	0240	0240.2	1	240.0	70.0		
	4995	MANI	3	0252.8	0301.3	24.7	49.4	13.3		
	8800	MANI	3	0254.6	0301.3	22.1	50.0	14.3		
	9750	IRKU	20	0255	0301.4	24	36.0	15.0		
	2695	CRON	21	0258	0301	35.5	1.4	.4		
	2695	MANI	3	0259	0301.3	15.7	17.9	6.9		
	1415	MANI	1	0301.2	0301.3	5.5	2.1	1.1		
	200	HIRA	6	0340.5	0340.9	1	60.0	30.0		
	200	HIRA	6	0343.2	0344	1.3	300.0	90.0		
	8800	MANI	3	0356.4	0359.6	12.3	37.6	11.8		
	2695	CRON	3	0358.5	0359.5	2.5	.2	.1		
	200	HIRA	6	0358.8	0359.5	1.2	3500.0	680.0		
	100	HIRA	45	0358.7	0359.8U	1.3D	250.0U	180.0U		
	9750	IRKU	3	0359	0359.6	2	25.0	6.0		
	9400	TYKW	3	0359	0359.6	1.5	20.0	7.0		
	2000	TYKW	1	0359	0400	5	3.0	1.0		
	1420	CRON	3	0359.5	0400.5	9	.6	.2		
	1415	MANI	1	0359.3	0359.6	1.7	4.2	1.1		
	1000	TYKW	1	0359	0359.8	5	10.0	3.0		
	606	MANI	1	0359.1	0359.9	3.7	8.5	3.1		
	200	GORK	44	0503 E		417 D		20.0		
	100	GORK	44	0509		348		5.0		
	410	SGMR	44	1118 E	1825.7	618 D	170.0			
	245	SGMR	44	1118 E	1820.7	618 D	330.0			

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
29	245	SGMR	44	1118 E	1820.7	618 D	330.0			
	606	SGMR	43	1526	1627.3	370 D	140.0			
	245	BOUL	43	1526		487 D			2	
	100	HIRA	44	2100	2256	695 D	120.0	50.0		
	4995	CRON	45	0525	0302.5	27.5	2.5	.7		
	100	HIRA	5	0554.7	0554.9	1	85.0	40.0		
	221	ABST	41	0707	0708.5	120	9.0			
	9750	IRKU	20	0709.3	0710.8	11	13.0	4.0		
	100	HIRA	6	0709.8	0710.3	1.2	70.0	20.0		
	2695	CRON	3	0710.5	0711.5	3.5	.6	.2		
	210	IZMI	41	0710	0712.1	2.6	4400.0			
	200	GORK	6	0710.1	0712.3	2.5	2000.0D			
	100	GORK	41	0710.1	0710.5	2.7	250.0			
	100	GORK		0710.1	0712		250.0			
	1420	CRON	3	0711	0712	2.5	.3	.1		
	100	HIRA	6	0711	0711.8	1.5	80.0	30.0		
	210	IZMI	48	0712	0712.1	.6	4400.0	400.0		
	100	HIRA	6	0717.5	0717.7	1	100.0	40.0		
	100	GORK	6	0717.7	0717.9	2	250.0	100.0		
	650	GORK	1	0757.6	0757.7	.5	4.0	2.0		
	234	POTS	40	0914.5	0915.4	7	750.0	30.0		
	4995	CANR	45	0925.5	0933	9.5	1.4	.4		
	9285	ARCE	21	0926.5	0930.3	23.4				
	3000	BERL	46	0926	0933.3	15	17.0	4.9		
	2695	CANR	45	0926	0933	17	1.9	.5		
	1500	BERL	46	0926	0933	17	34.0	5.7		
	237	TRST	42	0926	0931.6	14.4	830.0U			
	225	HARS	45	0926	0929	3	200.0	45.0		
	221	ABST	3	0926.2	0929.2	8.5	19.0	11.0		
	210	IZMI	48	0926	0929.3	4	350.0			
	100	GORK	41	0926.6	0930.1	7	300.0			
	100	GORK		0926.6	0933.2		300.0			
	9100	GORK	21	0927.4	0930	9.8	10.5	5.0		
	3000	BERL	3	0927.4	0927.5	.6	64.0	29.0		
	2950	GORK	45	0927.2	0927.6	11.3	104.0			
	2950	GORK		0927.2	0933.3		23.0			
	1420	ARCE	41	0927.3		9.4				
	1420	ARCE	40	0927.3	0928.5	2.7				
	1420	CANR	45	0927	0934	10	3.0	.8		
	950	GORK	2	0927.4	0930	3.6	5.2			
	930	BORD	45	0927	0933	9	41.0	5.0		
	650	GORK	40	0927.4	0929.2	4	7.7			
	200	GORK	41	0927.7	0931.9	6.5	250.0D			
	200	GORK		0927.7	0933.1		2000.0			
	9500	BERL	46	0928	0933.4	17	25.0	8.3		
	3100	CRIM	3	0928	0934	10	11.0	4.0		
	10500	BERN	45	0931.2	0933	8	14.0			
	10500	BERN		0931.2	0933.3		13.0			
	2695	CRON	3	0931.5	0933	2.5	1.5	.3		
	1420	ARCE	4	0931.2	0933.3	6.5				
	950	GORK	46	0931.7	0932.2	4.4	12.3			
	950	GORK		0931.7	0933.2		23.2			
	650	GORK	46	0931.5	0932.6	3.7	22.0			
	650	GORK		0931.5	0933.2		36.0			
	408	TRST	45	0931.7	0933.5	3.4	180.0	45.0		
	225	HARS	45	0931	0933	3.5	250.0	75.0		
	210	IZMI	48	0931	0933.8	3	230.0			
	9285	ARCE	3	0932.4	0933.7	2.8				
	9100	GORK	1	0932.5	0933	2	16.8	8.4		
	4995	CRON	3	0932.5	0933	1.3	2.5	1.0		
	9285	ARCE	8	0936	0936.1	.6				
	200	GORK	6	0939.5	0940.2	1.3	100.0D			
	950	GORK	1	0940.1	0940.2	.2	2.4	1.2		
	650	GORK	1	0940	0940.2	.4	2.0	1.0		
	210	IZMI	6	1021.1	1021.8	.8	130.0	70.0		
	4995	CANR	3	1224	1226	7	1.3	.5		
	10700	PENN	3	1225.8	1226.4		77.2			
	10500	BERN	3	1225.6	1226.6	10	60.0			
	9500	BERL	4	1225.4	1226.5	12	86.0	22.0		
	9400	HUAN	3	1225.6	1226.6	5.7	78.1	27.1		
	9285	ARCE	3	1225.7	1226.7	3				
	8800	SGMR	4	1225.6	1226.5	6	120.0	40.0		
	15400	SGMR	3	1226	1226.5	4.5	62.0	20.0		
	15400	SGMR	3	1226	1226.5	4.5	62.0	20.0		
	9400	SLOU	3	1226	1226.7	4	91.0			
	4995	SGMR	3	1226.2	1226.7	4.2	18.0	6.0		
	9285	ARCE	29	1228.7		15				
	9400	HUAN	20	1432.9	1436.8	13.3	11.4	5.3		
	2800	OTTA	20	1433	1440	25	4.2	2.0		
	2695	CANR	21	1434.5	1440	17	.6	.2		
	410	SGMR	6	1434.5	1435.8	8.9	5.3	1.4		
	245	SGMR	6	1434.4	1439.3	12.6	35.0	4.5		
	15400	SGMR	1	1435.7	1436.2	4.9	6.9	1.7		
	8800	SGMR	1	1435	1436.9	8.2	9.7	2.4		
	4995	SGMR	1	1435.1	1437	8.6	5.8	1.5		
	2695	SGMR	20	1435.1	1441.3	15.4	3.9	1.0		
	1415	SGMR	20	1435	1439.5	14.1	2.2	.6		
	1415	SGMR	20	1435	1439.5	14.1	2.2	.6		
	606	SGMR	20	1435 U	1436 U	16 U	5.7	1.5		
	606	SGMR	20	1435 U	1436 U	16 U	5.7	1.5		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
29	1420	CANR	21	1437	1440	16.5	.3	.1		
	10700	PENN	24	1510.4	1829.7		80.0			
	2700	PENN	24	1514.8	1822.1		69.3			
	9400	HUAN	23	1520.8	1828.6	391.4	82.0	51.2		
	2800	OTTA	21	1520	1805	440 D	40.0			
	960	PENN	24	1521.8	2020		6.4			
	960	PENN	41	1545.2	1548.2	4.8	46.7			
	4995	SGMR	23	1547.8	1652.1	179.7	50.4	25.2		
	2695	SGMR	23	1550.1	1652	317.9U	46.0	23.0		
	960	PENN	45	1550.7	1614.8	235	63.0	10.0		
	2700	PENN	3	1552	1614.5	37.6	194.0	18.4		
	1420	CANR	47	1552.5	1722	155	65.6	1.1		
	1415	SGMR	23	1552.4	1641.7	315.6U	41.7	20.8		
	15400	SGMR	23	1553.8	1652.1	190.6	64.7	32.1		
	930	BORD		1553						
	4995	BOUL	8	1558.5	1559	1.5	.7	.3		
	4995	BOUL	8	1604	1604.5	1	.9	.3		
	4995	CANR	45	1611.5	1616	9	11.7	2.7		
	4995	BOUL	45	1612	1614.5	9	18.2	7.0		
	4995	BOUL		1612	1615.5					
	2800	OTTA	4	1612	1614.5	5.5	152.0	56.0		
	15400	SGMR	46	1613.5	1614.3	4.6	142.0	35.0		
	10700	PENN	45	1613.1	1614.4	9	222.0	40.6		
	9400	HUAN	45	1613.4	1614.5	6.8	269.0	110.5		
	9400	HUAN		1613.4	1615.5		249.9			
	8800	SGMR	46	1613.3	1614.3	6.1	327.0	81.8		
	7000	SAOP	46	1613.1E	1614.5	8.5U	182.0			
	4995	SGMR	46	1613.1	1615.5	8	167.0	41.8		
	2695	SGMR	46	1613	1614.5	11.1	145.0	36.3		
	2695	CANR	45	1613.5	1615	10	15.8	5.7		
	2695	BOUL	45	1613.5	1615	7.5	15.7	3.8		
	1415	SGMR	46	1613	1614.7	12.8	110.0	27.0		
	4995	BOUL	45	1614	1616	9.5	9.9	3.5		
	2800	OTTA	29	1617.5		11	17.6	5.9		
	10700	PENN	20	1636.2	1641.9	33.3	29.9	17.1		
	4995	BOUL	47	1637	1722	47.5	71.5	2.4		
	2800	OTTA	40	1637	1652	65	8.2			
	2700	PENN	3	1637.2	1652.1	21	24.0	7.9		
	4995	BOUL	3	1651	1652	1.5	1.3	.4		
	1415	SGMR	41	1656.9	1720.9	33.1	650.0	65.0		
	2700	PENN	20	1712.9	1724.9	14.1	11.9	5.4		
	4995	BOUL	3	1732	1735	8	.4	.2		
	2700	PENN	1	1733.2	1733.5	.7	5.2	1.8		
	2700	PENN		1739.5	1752.3		45.0			
	10700	PENN		1740.3	1753.6		46.5			
	4995	BOUL	3	1740	1740.5	1.5	1.1	.4		
	4995	SGMR	46	1750.6	1753.7	11	52.0	22.0		
	8800	SGMR	46	1751.8	1753.6	11.6	63.0	26.0		
	4995	BOUL	45	1751.5	1753.5	9	2.1	.8		
	2800	OTTA	45	1751	1752.2	2	30.0			
	2800	OTTA	45	1751	1752.2	9	30.0	9.0		
	2695	SGMR	46	1751.2	1752.5	10.2	35.0	15.0		
	1415	SGMR	46	1751.7	1752.7	10.3	37.1	9.0		
	15400	SGMR	46	1752.1	1753.5	10.2	42.0	17.0		
	9400	HUAN	45	1752.6	1753.3	19	66.8	17.9		
	7000	SAOP	45	1752.1	1753.5	7.2	65.6			
	7000	SAOP	3	1752.1	1753.5	3	65.6	22.6		
	2695	BOUL	45	1752	1753.5	8	3.9	1.1		
	2800	OTTA	45	1753	1753.5	2	22.0			
	7000	SAOP	3	1755.1	1757.3	4.2	32.6	16.5		
	2800	OTTA	45	1755	1757	5	10.2			
	4995	BOUL	40	1824	2002	167.5	2.5	.7		
	1415	SGMR	41	1835.5	2010.7	152.5U	89.0	40.0		
	10700	PENN	3	1922.7	1923.6	3.7	16.9	2.8		
	4995	BOUL	8	2048	2049	3.5	2.8	.8		
	2800	OTTA	3	2048	2049	2.2	12.6	4.2		
	2700	PENN	3	2048	2049.2	3.8	19.1	5.0		
	4995	BOUL	45	2243.5	2245	9	1.1	.2		
	2695	PENT	8	2244	2244	.6	8.2	U		
	100	HIRA	45	2249.5	2250	2	220.0	140.0		
	3750	TYKW	45	2342	2346.7	30	41.0	8.0		
	8800	MANI	4	2345.7	2350.1	16.5	66.0	21.4		
	4995	CRON	45	2345.5	2346.5	22	3.7	.9		
	4995	MANI	4	2345.7	2350.3	18.6	33.4	14.5		
	2695	CRON	3	2345	2346.5	6.5	4.6	1.8		
	2695	MANI	4	2345.7	2346.9	7.6	50.0	11.1		
	1415	MANI	4	2345.7	2347	7.3	41.7	10.7		
	606	MANI	4	2345.6	2347.1	11.4	30.9	6.3		
	9400	TYKW	45	2346.5	2350.2	8.5	58.0	20.0		
	2695	PENT	3	2346	2347	2.5	44.0	20.0U		
	2000	TYKW	3	2346	2347	15	35.0	6.0		
	1420	CRON	3	2346.5	2348	10	3.1	1.0		
	1000	TYKW	3	2346	2347	15	41.0	7.0		
	9400	TYKW	29	2355		70	7.0	3.0		
	3750	TYKW	29	2412		60	5.0	2.0		
30	4995	CRON	45	0140	0143	9	3.2	.5		
	2695	CRON	45	0141.5	0143	8	1.4	.4		
	9400	TYKW	45	0142	0143.5	5 D	22.0	4.0U		
	3750	TYKW	45	0142	0142.8	12	16.0	5.0		

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OCTOBER 1972

OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
30	2000	TYKW	45	0142	0142.9	8	7.0	2.0		
	1420	CRON	45	0142	0147.5	9.5	.4	.2		
	4995	CRON	3	0229	0232	8	.7	.3		
	2695	CRON	3	0230	0232.5	3	.5	.2		
	1420	CRON	3	0230.5	0232.5	4.5	.3	.1		
	9400	TYKW	1	0231	0232	8	3.0	1.0		
	3750	TYKW	1	0231	0232	8	3.0	1.0		
	606	MANI	40	0328.2	0328.7	1.8	335.0	26.2		
	500	HIRA	6	0328.7	0328.7	1	710.0	90.0		
	606	MANI	8	0333.1	0333.2	.4	380.0	21.9		
	4995	CRON	45	0410	0411.5	7.5	1.1	.3		
	2695	CRON	45	0441.5	0443.5	14.5	.6	.2		
	3750	TYKW	45	0442	0453.2	60	13.0	4.0		
	2000	TYKW	20	0442	0444	90	2.0	1.0		
	9400	TYKW	20	0450	0453	60	6.0	3.0		
	4995	CRON	21	0451.5	0453.5	15	.9	.3		
	200	GORK	44	0503 E		417 D		20.0		
	100	GORK	44	0503 E		348 D		20.0		
	221	ABST	41	0733	0746.5	114	10.0			
	410	SGMR	44	1120 E	1603.5	614 D	19.4			
	245	SGMR	44	1120 E	1531.5	614 D	86.4			
	9750	IRKU	3	0516.2	0517	12	79.0	11.0		
	9400	TYKW	3	0516	0516.8	4	65.0	20.0		
	9100	GORK	3	0516.3	0517.2	1.7	65.0	32.0		
	8800	MANI	3	0516.5U	0517 U	2.6U	70.0U	14.6U		
	4995	CRON	8	0516.5	0517	4	2.2	.9		
	4995	MANI	3	0516.5U	0517 U	2.6U	19.4U	5.8U		WX
	3750	TYKW	3	0516	0517.2	4	15.0	6.0		
	2950	GORK	3	0516.3	0517.5	10.6	19.6	5.8		
	2695	CRON	3	0516	0517.5	3.5	1.4	.4		
	2695	MANI	3	0516.5U	0516.9U	3.5U	12.4U	4.1U		
	2000	TYKW	45	0516.4	0517.5	3.5	31.0	9.0		
	1415	MANI	1	0516.5U	0517.4U	3.5U	9.5U	3.2U		WX
	1000	TYKW	1	0516.5	0517.2	4	8.0	3.0		
	950	GORK	1	0516.6	0517.6	4.4	5.0	2.5		
	650	GORK	41	0516.5	0517.2	10.6	6.1	3.0		
	650	GORK		0516.5	0526.4		14.0			
	606	MANI	1	0516.5	0517.4	3.5U	4.7	1.8		
	200	HIRA	6	0516	0516.2	1.5	410.0	140.0		
	100	HIRA	6	0516.3	0516.8	1.5	240.0	130.0		
	1420	CRON	3	0517	0518	2.5	1.0	.4		
	500	HIRA	6	0517	0517.2	.5	100.0	50.0		
	2950	GORK	29	0518	0518	9	7.0	3.5		
	9400	TYKW	29	0520		10	5.0	3.0		
	3750	TYKW	29	0520		10	5.0	3.0		
	950	GORK	41	0523.7	0524	3.2	3.2			
	950	GORK		0523.7	0526.4		4.4			
	606	MANI	4	0525.4	0526.4	1.7	11.8	1.8		
	9100	GORK	1	0526.2	0526.4	.5	7.7	3.8		
	2950	GORK	21	0610.4		137				
	9100	GORK	21	0619.8	0739	353.5	88.0	38.0		
	650	GORK	2	0619	0619.1	.6	3.0			
	650	GORK	1	0619.9	0620.2	.5	2.0	1.0		
	9500	BERL	46	0707.5	0729	80	842.0	31.0		
	4995	CRON	47	0709.5	0729.5	57.5	69.1	18.9		
	2695	CRON	45	0709	0730.5	80	10.3	4.3		
	1500	BERL	46	0709.6	0728.7	77	75.0	9.0		
	930	BORD	45	0709	0711.3	3	14.0	2.0		
	3100	CRIM		0710	0729	90	141.0			
	3000	BERL	46	0710	0729.4	82	172.0	27.0		
	1420	CRON	8	0711.5	0712	1	5.0	1.6		
	950	GORK	3	0711	0711.4	2.1	7.1	1.7		
	650	GORK	46	0718.5	0725.1	12.3	33.0			
	650	GORK		0718.5	0726		45.0			
	650	GORK		0718.5	0728.7		65.0			
	930	BORD	45	0719	0728.5	11	243.0	6.0		
	606	MANI	40	0719.4	0728.6	10.6	77.0	4.7		
	8800	MANI	47	0720.6	0729.2	23.5	940.0	100.0		
	4995	MANI	47	0720.6	0729.2	23.5	780.0	122.0		
	2695	MANI	4	0720.6	0729.4	22.7	86.0	11.0		
	1415	MANI	40	0720.6	0728.7	11.2	164.0	5.3		
	950	GORK	46	0720.1	0722.2	10.1	16.8			
	950	GORK		0720.1	0725		50.0			
	950	GORK		0720.1	0728.8		55.0			
	1420	CRON	8	0721	0722	2	1.5	.2		
	2950	GORK	46	0724.4	0727.4	7.8	56.0			
	2950	GORK		0724.4	0729.3		172.0			
	1420	CRON	41	0724.5	0729	7	11.8	.3		
	10500	BERN	47	0726.9	0727.2	34	73.0			
	10500	BERN		0726.9	0729.1		560.0			
	9100	GORK	45	0727	0727.3	8.2	266.0			
	9100	GORK		0727	0729.2		1329.0			
	237	TRST	41	0743	0743.3	.5	100.0D			
	650	GORK	4	0744.2	0744.5	.5	13.0	6.0		
	234	POTS	45	0744.1	0744.2	.4	1200.0	120.0		
	210	IZMI	48	0744	0744.7	.8	950.0	160.0		
	950	GORK	20	0755.8	0801.7	34.3	5.3	2.6		
	1420	CRON	3	0804	0805	2	.3	.1		
	650	GORK	41	0812.1	0812.3	3.1	8.5	4.0		
	650	GORK		0812.1	0814.8		17.0	8.0		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
30	1420	CANR	3	0814	0815	2.5	.4	.1		
	9500	BERL	21	0830	1110	260	13.0			
	2695	CANR	45	0844	0844.5	3	.4	.1		
	1420	CRON	45	0844.5	0845.5	3.5	.5	.1		
	950	GORK	1	0844.8	0845	2.5	1.1	0.5		
	4995	CANR	3	0845.5	0846	1.5	.5	.2		
	1420	CANR	45	0845	0845.5	3	.6	.2		
	210	IZMI	48	0847	0847.7	.8	780.0	200.0		
	234	POTS	40	0849.4	0849.8	.4	14000.0	1200.0		
	3000	BERL	21	0857.5	1000	158	13.0			
	650	GORK	40	0859.6	0859.8	1.3	4.3			
	950	GORK	1	0900	0903	1	1.7	0.8		
	4995	CANR	3	0908	0910	8.5	.6	.2		
	1500	BERL	21	0908.5	0940.4	50	4.6			
	1420	CRON	45	0908	0909.5	2	.5	.1		
	650	GORK	46	0908.9E	0909.2	4.3E	27.0			
	650	GORK		0908.9	0911		25.0			
	4995	CRON	21	0909.5	0911	10	.9	.3		
	1420	CANR	8	0909	0910	1.5	.5	.2		
	210	IZMI	6	0909	0909.8	1	90.0	45.0		
	950	GORK	45	0910.3	0911.2	1.8	52.0			
	950	GORK		0910.3	0911.4		24.0			
	930	BORD	45	0910	0911.2	3	130.0	4.0		
	2950	GORK	21	0919.5	1000.8	88	19.5	10.0		
	3100	CRIM	3	0921	0930	20	8.0	3.0		
	650	GORK	4	0922.3	0922.4	1.4	4.0	1.7		
	2695	CANR	21	0926.5	0931.5	13	1.1	.4		
	950	GORK	21	0926.4	0941.3	24.5	4.4	2.6		
	650	GORK	22	0926.8	0933.9	16.4	6.4			
	210	IZMI	24	0926.5		27.5	100.0	30.0		
	2695	CRON	45	0928.5	0931	10	.6	.3		
	234	POTS	40	0931.6	0941.4	10	450.0	1.0		
	221	ABST	3	0931	0936	16.5	58.0	19.0		
	4995	CANR	45	0946.5	0948	5	3.9	1.7		
	2695	CRON	3	0946	0948.5	6	1.3	.4		
	1420	CRON	8	0946.5	0949.5	3.5	2.5	.2		
	4995	CRON	45	0947	0948.5	10.5	7.5	1.8		
	3100	CRIM	3	0947	0948	15	14.0	5.0		
	3000	BERL	4	0947	0949	5	24.0			
	2950	GORK	3	0947.3	0949.1	3.3	27.0	11.0		
	2695	CANR	3	0947	0949	5.5	1.6	.7		
	9500	BERL	4	0948	0949	6	56.0			
	9400	SLOU	4	0948	0949	4	44.0			
	9285	ARCE	4	0948	0949.1	3.8				
	9100	GORK	4	0948	0949.1	2.7	47.0	21.0		
	1500	BERL	4	0948.4	0949.3	1.1	30.0			
	1420	ARCE	4	0948.4	0949.2	3.6				
	1420	CANR	8	0949	0950	2	3.6	1.5		
	950	GORK	1	0949	0949.1	.8	3.6			
	9285	ARCE	29	0951.8		13.6				
	210	IZMI	41	0953	0953.1	1	300.0			
	100	GORK	41	0956.6	0957.1	8.6	700.0			
	100	GORK		0956.6	1003.3		1000.0			
	200	GORK	6	1002.8	1003.2	1.5	300.0	150.0		
	1500	BERL	21	1006.5	1019	89	23.0			
	200	GORK	6	1017.6	1018	.7	700.0	350.0		
	100	GORK	6	1017.6	1018	.8	2000.0			
	23	POTS	45	1017.8	1018	.6	40000.0	1000.0		
	234	POTS	40	1018.1	1018.1	4.3	350.0	1.0		
	210	IZMI	41	1018	1019.1	5	200.0			
	200	GORK	6	1022.2	1022.4	.3	1000.0	500.0		
	100	GORK	6	1022.4	1022.5	.2	2000.0	1000.0		
	3100	CRIM	3	1028	1029	3	10.0	3.0		
	4995	CANR	8	1034.5	1035.5	3.5	2.1	.8		
	2695	CANR	8	1035	1036.5	3.5	1.7	.6		
	950	GORK	3	1035.9	1036.2	1.2	11.0			
	930	BORD	45	1035	1036.1	2	28.0	3.0		
	200	GORK	41	1035.8	1036.1	1	800.0			
	200	GORK		1035.8	1036.5		150.0			
	9285	ARCE	3	1036	1036.4	2				
	9100	GORK	3	1036.3	1036.5	.4	35.0	17.0		
	7000	SAOP	3	1036	1036.4	2	21.8	5.3		
	2950	GORK	3	1036	1036.5	2.3	21.0			
	1420	ARCE	3	1036	1036.5	2.2				
	1420	CANR	3	1036.5	1037.5	4	.8	.3		
	234	POTS	5	1036	1036	.1	700.0	250.0		
	210	IZMI	41	1036	1036.4	1	130.0			
	100	GORK	6	1036.1	1036.5	1	1500.0	700.0		
	1500	BERL	3	1046	1046.4	3.5	8.6			
	1500	BERL	3	1054	1054.3	.5	13.0			
	4995	CANR	45	1108.5	1109	6.5	.5	.2		
	650	GORK	22	1115.9	1116	16.8	5.0	2.5		
	1500	BERL	21	1206	1214.4	40	1.7			
	9400	HUAN	20	1218.2	1225.2	13.4	11.3	5.3		
	237	TRST	41	1219.9	1220.6	2.2	96.0			
	3000	BERL	20	1220	1223.7	17	4.6			
	2695	SGMR	40	1220.2	1224	5.3	4.4	2.0		
	1500	BERL	46	1220.4	1220.6	6.6	5.8			
	1420	CANR	8	1220	1221.5	2.5	.5	.2		
	1415	SGMR	45	1220.4	1220.7	5.7	6.1	2.5		

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OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
30	410	SGMR	6	1220.2	1220.6	5.1	135.0	12.0		
	408	TRST	41	1220.5	1220.6	.9	470.0			
	245	SGMR	6	1220.2	1220.6	5.5	59.0	6.0		
	4995	CANR	45	1222.5	1223	2	.3	.1		
	2695	CANR	3	1222.5	1223.5	3	.5	.2		
	23	POTS	45	1222.1	1222.2	.5	10000.0	2500.0		
	1420	CANR	8	1224	1225	2	.4	.2		
	1420	CANR	8	1228	1229	2	1.6	.6		
	9400	HUAN	20	1233.8	1247.6	20.8	11.3	5.6		
	2695	CANR	3	1237.5	1239	4	.4	.1		
	1500	BERL	45	1237.2	1238.5	2.3	13.0			
	1415	SGMR	46	1237.7	1238.8	3	17.0	7.2		
	930	BORD	45	1237	1237.8	3	41.0	2.0		
	606	SGMR	4	1237.4	1237.9	2	17.0	6.0		
	410	SGMR	6	1237.6	1237.9	1	7.0	3.0		
	245	SGMR	6	1237.2	1238.4	2.2	30.0	10.0		
	2695	SGMR	1	1326.9	1328.3	4.2	6.2	2.0		
	2695	CANR	3	1327.5	1328	1	.3	.1		
	606	SGMR	46	1327.5	1327.7	1.5	27.9	5.0		
	4995	SGMR	1	1328.1	1328.4	.7	4.3	1.5		
	2800	OTTA	1	1328	1328.2	1	2.8	1.4		
	2800	OTTA	21	1400	1450		12.6	5.2		
	9400	HUAN	20	1407.3	1412	10.8	9.4	4.2		
	245	BOUL	42	1421	1432	31			1	
	9400	HUAN	20	1427.8	1434.1	14.8	7.5	4.5		
	4995	BOUL	3	1427.5	1429	9.5	1.3	.4		
	2800	OTTA	20	1428.5	1429	7	1.8	1.0		
	1415	SGMR	1	1443.5	1446	9.8	2.9	1.3		
	9400	HUAN	21	1444.6	1453	39.6	18.8	8.0		
	4995	CANR	21	1444.5	1447	39.5	2.1	.5		
	8800	SGMR	3	1445.7	1447.8	3.1	24.0	11.0		
	4995	BOUL	21	1445.5	1447	12	3.1	.8		
	2695	SGMR	20	1445.5	1447.8	26.4	8.9	4.0		
	1500	BERL	4	1445.2	1445.8	2.8D	4.6			
	10700	PENN	20	1446.1	1447.8	28	20.0	7.0		
	9500	BERL	4	1446.5	1447.7	1.5D	13.0			
	9400	HUAN	1	1446.8	1447.3	1.6	16.9	6.9		
	7000	SAOP	22	1446		29.6	37.1			
	4995	SGMR	3	1446.1	1447.8	2.7	35.0	15.0		
	3000	BERL	4	1446.5	1447.7	1.5D	11.0			
	2700	PENN	20	1446.3	1447.8	28.4	22.8	7.4		
	2695	CANR	21	1446.5	1447.5	10	.9	.3		
	2800	OTTA	1	1447	1447.7	1.5	6.6	3.3		
	8800	SGMR	29	1448.8	1452.5	55.7	19.0	9.0		
	4995	SGMR	29	1448.8	1451.5	37.3	22.0	10.0		
	245	BOUL	42	1532	1542	36			1	
	2800	OTTA	21	1630	1650	120	17.0	6.6		
	9400	HUAN	23	1637.2	1704.9	83.4	43.2	16.9		
	15400	SGMR	23	1641.6	1649.9	79.5	27.9	13.8		
	8800	SGMR	45	1643.8	1654.7	16.9	153.0	62.0		
	4995	CANR	45	1643.5	1655	38	9.1	2.7		
	10700	PENN	45	1644.6	1655	11.6	63.3	31.3		
	7000	SAOP	23	1644.8	1654.6	69.9	162.2			
	7000	SAOP	22	1644.8		69.9	71.4			
	4995	BOUL	45	1644	1655	24.5	14.5	5.0		
	4995	SGMR	45	1644.6	1654.7	15.8	138.0	59.0		
	2700	PENN	45	1644.6	1650	11.6	46.1	22.2		
	2695	SGMR	45	1644.5	1649.9	12	26.0	10.2		
	9400	HUAN	45	1645.9	1654.5	17.1	62.0	16.5		
	2695	BOUL	45	1645	1650	24.5	2.4	.7		
	1420	CANR	3	1647.5	1650	3	.4	.1		
	1415	SGMR	2	1647	1649.7	6.2	3.8	1.9		
	4995	BOUL	3	1648.5	1650	2.5	.5	.2		
	2695	CANR	45	1648.5	1650	8.5	2.6	.7		
	7000	SAOP	3	1649.2	1650	1.5	23.8	12.5		
	2800	OTTA	4	1649	1650	3	16.0	7.0		
	7000	SAOP	4	1652.2	1654.6	3.5	100.9	31.8		
	2800	OTTA	1	1654	1654.7	2	4.6	2.3		
	10700	PENN	29	1656.2	1656.2	87.1	38.0	15.3		
	2700	PENN	29	1656.2	1656.2	76.1	21.3	9.3		
	2695	SGMR	30	1656.9	1656.9	58.1	17.5	7.2		
	8800	SGMR	30	1700.7	1700.7	41.6	43.9	22.0		
	4995	SGMR	30	1700.4	1700.4	46.9	88.7	44.3		
	960	PENN	1	1706.1	1706.6	.9	3.9	0.7		
	245	BOUL	42	1722	1731	38			1	
	2695	BOUL	8	1724.5	1726	2	7.3	2.5		
	10700	PENN	3	1734.8	1735.7	2.2	46.2	8.8		
	9400	HUAN	8	1734.7	1735.6	1.6	65.8	22.8		
	8800	SGMR	3	1734.8	1735.7	2.6	175.0	42.0		
	7000	SAOP	3	1734.7	1735.6	1.7	54.4	27.2		
	4995	BOUL	8	1734	1735.5	2.5	3.8	1.8		
	4995	CANR	8	1734.5	1735	1	3.0	1.2		
	4995	SGMR	3	1734.8	1735.7	2.8	53.0	14.0		
	2800	OTTA	4	1734.7	1735.8	2.5	57.0	6.0U		SPIKE=83
	2700	PENN	3	1734.6	1735.8	4.4	98.1	8.9		
	2695	SGMR	3	1734.8	1735.8	1.7	67.0	17.0		
	15400	SGMR	3	1735.5	1735.7	.5	10.9	2.0		
	4995	BOUL	8	1735	1736	2	1.5	.6		
	1420	CANR	8	1735.5	1736	1	1.4	.4		
	1415	SGMR	3	1735.4	1735.8	.9	17.4	4.0		

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OCT 1972	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
30	960 PENN	3	1735.5	1735.8	1.5	14.5	2.4		
	606 SGMR	3	1735.5	1735.7	.9	17.1	4.0		
	410 SGMR	48	1735.4	1735.6	.9	975.0	90.0		
	245 SGMR	6	1735.4	1735.6	1	40.5	10.0		
	2695 CANR	8	1736	1736.5	1	8.5	2.9		
	960 PENN	3	1800	1803.4		13.3			
	4995 BOUL	3	1801.5	1802.5	2.5	.7	.2		
	2800 OTTA	1	1801.5	1802.5	3.5	3.8	1.4		
	2695 BOUL	8	1801.5	1802.5	3	.6	.2		
	4995 BOUL	45	1802	1804	3	1.0	.3		
	10700 PENN	20	1849.1	1854.2	17.1	16.9	4.4		
	8800 SGMR	3	1851.9	1854.1	8.5	20.5	5.1		
	9400 HUAN	21	1852.4	1908.6	21.7	9.4	7.1		
	9400 HUAN	2	1852.9	1854.5	2.5	16.9	4.0		
	10700 PENN	3	1929.8	1933.9	24.1	59.1	11.1		
	9400 HUAN	3	1930.3	1933.7	22.5	60.2	12.1		
	2700 PENN		1958	2105.2		25.3			
	4995 BOUL	3	1959	1959.5	2.5	1.1	.4		
	9400 HUAN	21	2003.6	2101.4	64.1	9.4	8.8		
	2800 OTTA	21	2005	2148	180 D	19.8			
	4995 BOUL	45	2012.5	2017.5	6.5	1.1	.3		
	245 BOUL	41	2012	2018	10			1	
	2800 OTTA	2	2014.5	2017.5	4.5	6.2	3.0		
	4995 BOUL	45	2017	2018.5	2.5	.4	.1		
	2695 BOUL	45	2017	2018	2.5	.6	.2		
	10700 PENN	3	2058.9	2059.1	1.4	20.4	5.6		
	9400 HUAN	1	2058.2	2059	1.5	22.6	5.6		
	8800 SGMR	3	2058.8	2059	.8	22.6	5.6		
	1415 SGMR	8	2117.4	2117.5	.2	25.2	8.2		
	606 SGMR	8	2117.4	2117.5	.2	10.9	2.2		
	410 SGMR	6	2117.2	2117.6	.6	13.8	2.7		
	245 SGMR	6	2117.2	2117.5	.6	37.2	14.4		
	2695 BOUL	8	2122.5	2123	1	.7	.3		
	2695 BOUL	8	2129.5	2130	1.5	.8	.3		
	4995 BOUL	3	2302	2305.5	17.5	4.7	1.5		
	9400 TYKW	3	2304	2305.8	4	190.0	50.0		
	4995 CRON	3	2304	2305.5	22.5	3.1	1.2		
	8800 MANI	4	2305	2305.8	6.7	235.0	31.4		
	4995 MANI	4	2305	2305.8	8.5	50.0	13.9		
	3750 TYKW	20	2305	2305.8	55	13.0	4.0		
	2695 MANI	2	2305 U	2306.6U	4 U	8.9U	3.0U		
	9400 TYKW	29	2308		50	24.0	10.0		
31	9750 IRKU	1	0310	0315.3	8	7.0			
	8800 MANI	1	0310.7	0312.2	2.3	10.6	4.2		
	4995 MANI	1	0310.7	0312.2	2.9	7.0	2.8		
	9400 TYKW	45	0400	0505.1	120	190.0	40.0		
	3750 TYKW	45	0405	0505	115	45.0	19.0		
	8800 MANI	22	0411.9	0425.7	31	42.2	8.4		
	4995 CRON	45	0411.5	0505	83	9.9	1.8		
	4995 MANI	22	0411.9	0425.9	31.9	21.0	5.6		
	9750 IRKU	20	0412	0425.1	38	50.5	14.5		
	2000 TYKW	20	0425	0505	95	7.0	3.0		
	8800 MANI	4	0457	0505.3	37	180.0	44.4		
	4995 MANI	4	0457.6	0505	34.9	113.0	28.0		
	9100 GORK	23	0458.9	0507.3	38	121.0	51.0		
	2695 CRON	45	0458.5	0502	38	1.0	.3		
	2695 MANI	22	0458.3	0501.6	33	12.4	3.7		
	1415 MANI	40	0458	0500.6	18	153.0	12.7		
	9750 IRKU	20	0500	0505	43 D	196.0			
	9100 GORK	22	0503.9	0505.4	3.1	68.0	25.0		
	950 GORK	21	0503 E	0632.6	106.6	4.4	2.7		
	950 GORK	3	0503.8U	0504.1	.7	8.7			
	1420 CRON	45	0504	0505	2	.3	.2		
	950 GORK	1	0551.7	0552.1	.6	2.0	1.0		
	4995 MANI	41	0607.8	0610.8	6.8	35.0	5.6		
	1415 MANI	40	0607.8	0611.1	8.6	54.0	8.5		
	606 MANI	40	0607.8	0612.6	10.3	40.7	1.7		
	8800 MANI	40	0608.7	0611.5	5.9	48.5	10.6		
	9750 IRKU	45	0609	0610.8		68.5			
	9750 IRKU		0609	0612.7	11	52.0			
	3100 CRIM	41	0609	0611	51	17.0	6.0		
	3100 CRIM		0609	0613		12.0	4.0		
	2695 CRON	45	0609	0610.5	9	.7	.2		
	2695 MANI	3	0609.7U	0610.9U	4.9U	13.6U	2.5U		
	650 GORK	46	0609.6	0611	4.8	6.1			
	650 GORK		0609.6	0612.6		15.7			
	9400 TYKW	45	0610.5	0610.8	8	45.0	10.0		
	9100 GORK	41	0610.6	0610.9	6.5	45.0			
	9100 GORK		0610.6	0612.8		30.0			
	4995 CRON	45	0610	0610.5	8.5	3.2	.9		
	3750 TYKW	45	0610.5	0610.8	5	128.0	10.0		
	2950 GORK	41	0610.3	0610.9	6.4	28.0	6.0		
	2950 GORK		0610.3	0612.7		15.0	3.0		
	2000 TYKW	45	0610.5	0612.8	4	31.0	4.0		
	1420 CRON	45	0610.5	0613	3	2.9	1.0		
	1000 TYKW	45	0610.5	0610.9	4	65.0	10.0		
	950 GORK	45	0610.5	0610.9	3.2	25.0			
	950 GORK		0610.5	0612.7		26.5			
	500 HIRA	6	0610.5	0612.8	2.7	130.0	10.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1972

OCT 1972	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
31	200	HIRA	6	0610.8	0611	1	200.0	140.0		
	200	GORK	6	0610.6	0611.1	.7	400.0	200.0		
	100	HIRA	6	0610.5	0610.9	1.3	220.0	70.0		
	100	GORK	6	0610.8	0611.3	.5	1300.0			
	100	HIRA	6	0613	0613.6	1	120.0	50.0		
	100	GORK	44	0614		88		5.0		
	100	GORK	6	0724	0724.3	.6	150.0	60.0		
	3100	CRIM	3	0725	0726	2	9.0	3.0		
	2695	CRON	8	0725.5	0726.5	1.5	.7	.2		
	9100	GORK	1	0726.4	0727	2	7.2	3.6		
	2950	GORK	4	0726.2	0726.9	1	13.6	6.0		
	650	GORK	3	0726.3	0726.7	.7	14.7	7.0		
	100	GORK	44	0830		270 D		5.0		
	245	SGMR	44	1121 E	1501.6	612 D	275.0			
	100	HIRA	44	2105	0430	569 D	70.0	20.0		
	200	GORK	41	1219.4	1219.6	1.1	200.0			
	200	GORK		1219.4	1220.3		40.0			
	200	GORK	6	1225.6	1225.9	.6	200.0	100.0		
	100	GORK	6	1253.6	1254.2	1.8	200.0	100.0		
	2800	OTTA	1	1328	1331	4.5	1.8	0.9		
	606	SGMR	3	1334.7	1334.8	.3	10.1	2.5		
	410	SGMR	6	1334.6	1334.7	.5	128.7	32.5		
	245	SGMR	48	1334.6	1334.8	1.7	880.0	220.0		
	237	TRST	42	1334.7	1334.8	1.2	5900.0U			
	234	POTS	40	1334.8	1334.9	1.1	8000.0	400.0		
	2800	OTTA	21	1440	1445	25	2.8	1.4		
	1415	SGMR	21	1440.9	1455.4	15.6	2.2	1.0		
	960	PENN	45	1440.8	1444.4	9	6.8	1.4		
	4995	BOUL	45	1441.5	1444.5	6.5	3.3	.5		
	4995	SGMR	22	1441.3	1444.3	26.8	6.3	2.4		
	2700	PENN	20	1441.6	1444.1	14.4	6.9	3.5		
	2695	SGMR	23	1441	1446.5	17.5	6.0	3.0		
	1500	BERL	46	1441.8	1444.3	6.2U	24.0			
	410	SGMR	6	1441.6	1444.1	8.5	13.0	4.0		
	1420	CANR	45	1442	1445	9.5	3.5	.6		
	1415	SGMR	46	1442	1444.5	7.9	39.4	8.0		
	245	SGMR	6	1442.5	1443.8	7.1	140.0	45.0		
	237	TRST	42	1442.8	1443.7	7	370.0			
	237	TRST		1442.8	1445.9		230.0			
	237	TRST		1442.8	1448.8		550.0			
	606	SGMR	46	1443.7	1445	3.9	11.2	3.0		
	18	MCMA	6	1443	1447	7			2	
	225	HARS	45	1444	1445	6	170.0	25.0		
	2800	OTTA	8	1446.5	1446.5		30.0			
	2695	BOUL	45	1446.5	1449.5	3	2.9	1.0		
	3000	BERL	4	1448.5	1449	1 U	15.0			
	2800	OTTA	3	1448.5	1448.9	1	30.0	7.0		
	2695	CANR	8	1448	1449	1.5	4.0	1.7		
	2695	SGMR	4	1448.7	1449	.8	32.6	8.0		
	234	POTS	45	1448.5U	1449 U	1 U	450.0	50.0		
	18	MCMA	6	1501	1502	4			1	
	9400	HUAN	20	1507.5	1515.6	23	9.4	2.6		
	2800	OTTA	21	1530	1555	20	2.8	1.4		
	18	MCMA	42	1546	1555	11			1	
	2695	BOUL	3	1550.5	1553.5	4.5	.5	.2		
	4995	SGMR	5	1552.9	1553.1	.4	3.2	1.6		
	2800	OTTA	1	1552.5	1553	1	4.2	2.1		
	2700	PENN	1	1552.4	1553	4.8	5.2	1.1		
	2695	SGMR	1	1552.4	1553	6.8	3.8	1.9		
	15400	SGMR	8	1600.4	1600.6	.5	49.7	19.8		
	2800	OTTA	20	1610	1622	75	5.6	2.8		
	10700	PENN	20	1613.9	1622.9	56.9	20.1	6.1		
	2700	PENN	20	1614	1623	33.9	5.1	2.5		
	9400	HUAN	21	1615.7	1626.8	61.5	10.8	16.1		
	7000	SAOP	20	1621.8		10	19.5			
	4995	CANR	3	1621.5	1625	7.5	.8	.3		
	960	PENN	45	1621.9	1622.2	1.4	1.1	0.3		
	9400	HUAN	2	1622.1	1623.6	3.9	20.7	13.6		
	960	PENN	45	1634.9	1636.3	2	5.6	1.1		
	4995	BOUL	8	1636	1636.5	1.5	.5	.2		
	960	PENN	41	1644.7	1647.4	3.1	1.7			
	960	PENN		1703.8	1704.7	8.5	22.9	2.9		
	2700	PENN	45	1704.2	1704.7	.8	5.2	1.7		
	18	MCMA	6	1724	1726	3			1	
	10700	PENN	1	1805	1806.7	5.2	7.8	0.7		
	2800	OTTA	27	1845		30	2.8			
	7000	SAOP	22	1924.5		26.8	32.3			
	2800	OTTA	21	1940	2040	120	5.2	2.6		
	9400	HUAN	20	1946.3	2004.2	32.1	16.9	7.8		
	4995	BOUL	3	2001.5	2004	4.5	1.6	.5		
	2800	OTTA	1	2003.5	2004	2.5	1.2	0.6		
	2695	BOUL	3	2003.5	2004.5	2	.4	.1		
	18	MCMA	41	2015	2017	7			1	
	9400	HUAN	22	2024	2051.4	80.4	20.7	5.4		
	9400	HUAN	20	2146.8	2154.1	65.4	22.6	10.1		
	4995	BOUL	8	2244.5	2245	1.5	1.1	.4		
	3750	TYKW	45	2244.3	2244.7	1.5	16.0	5.0		
	2695	BOUL	8	2244.5	2246	1.5	3.0	1.2		
	2695	PENT	4	2244.5	2244.8	1.5	43.0	10.0U		
	2000	TYKW	45	2244.3	2244.8	1.5	110.0	22.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1972

OCT 1972	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
31	208 VORO	7	2244.5	2244.9	.9	540.0	250.0		
	100 HIRA	5	2244.5	2245 U	.9D	170.0U	70.0U		
	3750 TYKW	1	2331	2332	3	3.0	1.0		
	2000 TYKW	1	2331	2332	2	2.0	1.0		
	3750 TYKW	20	2344	2347	15	3.0	1.0		

Observatories:

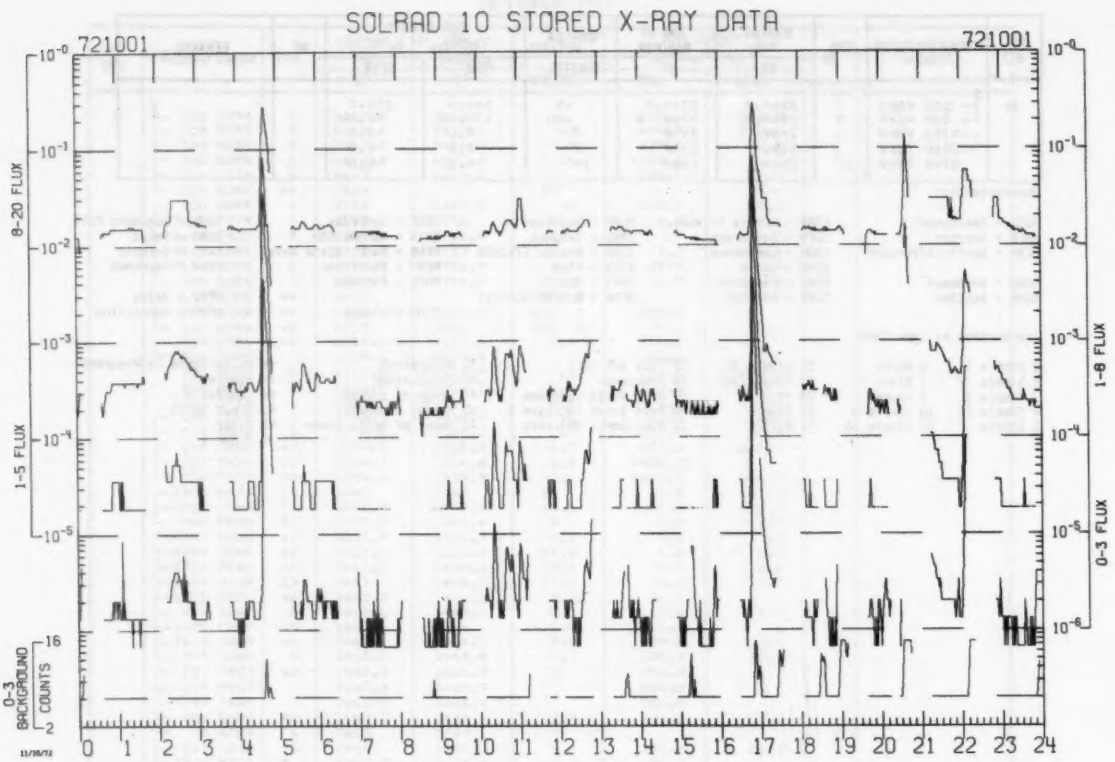
ABST = Abastumani
ARCE = Arcetri
BERL = Berlin-Adlershof
BORD = Bordeaux
BOUL = Boulder
CANR = Canary Islands
CRIM = Simferopol
CRON = Carnarvon
GORK = Gorky
HARS = Harestua
HIRA = Hiraiso
HUAN = Huancayo
IRKU = Irkutsk
IZMI = Moscow IZMIRAN
KIEV = Kiev
MANI = Manila
MCMA = McMath-Hulbert
ONDR = Ondrejov
OTTA = Ottawa ARO
PENN = Penn. State Univ.
PENT = Penticton
POTS = Potsdam
SLOU = Slough
SGMR = Sagamore Hill
TOKO = Tokyo
TRST = Trieste
TYKW = Toyokawa
UPIC = Upice
VORO = Voroshilov

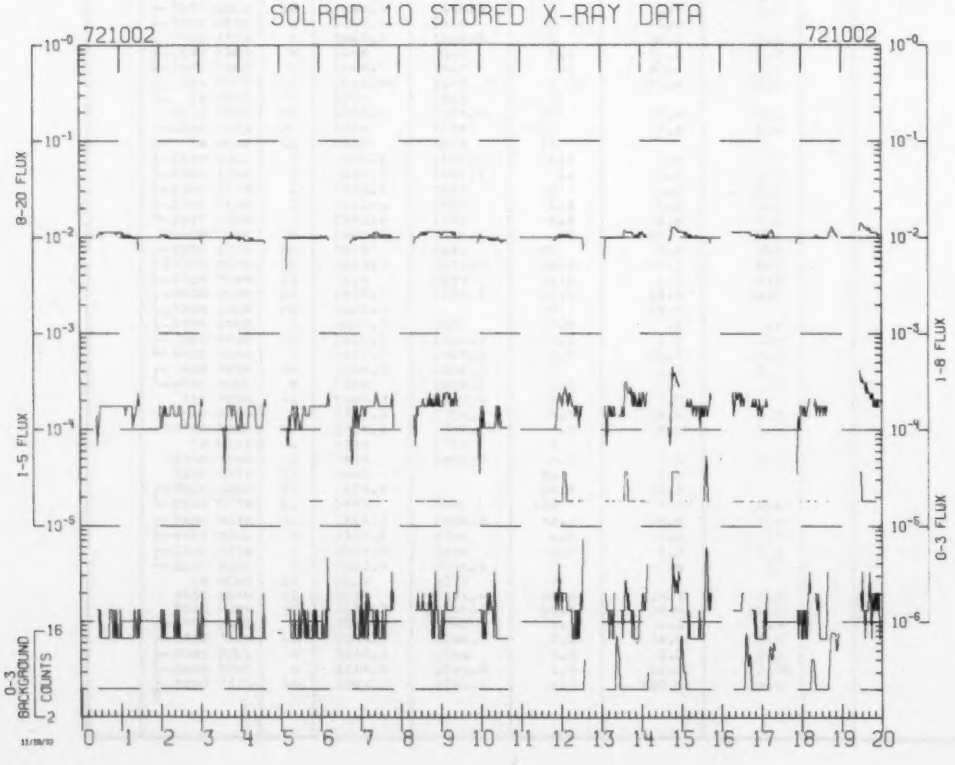
Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

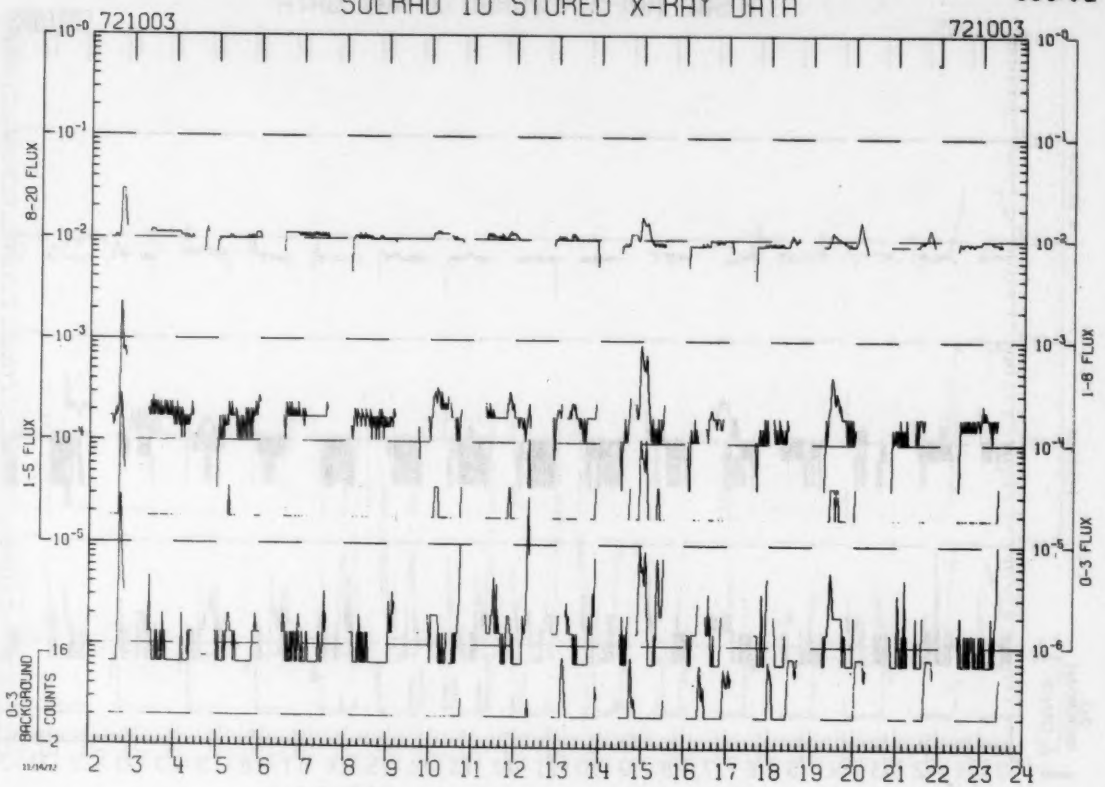
SOLAR X-RAYS MEASURED BY SATELLITE SOLRAD 10 - EXPLORER 44

OCTOBER 1972





SOLRAD 10 STORED X-RAY DATA



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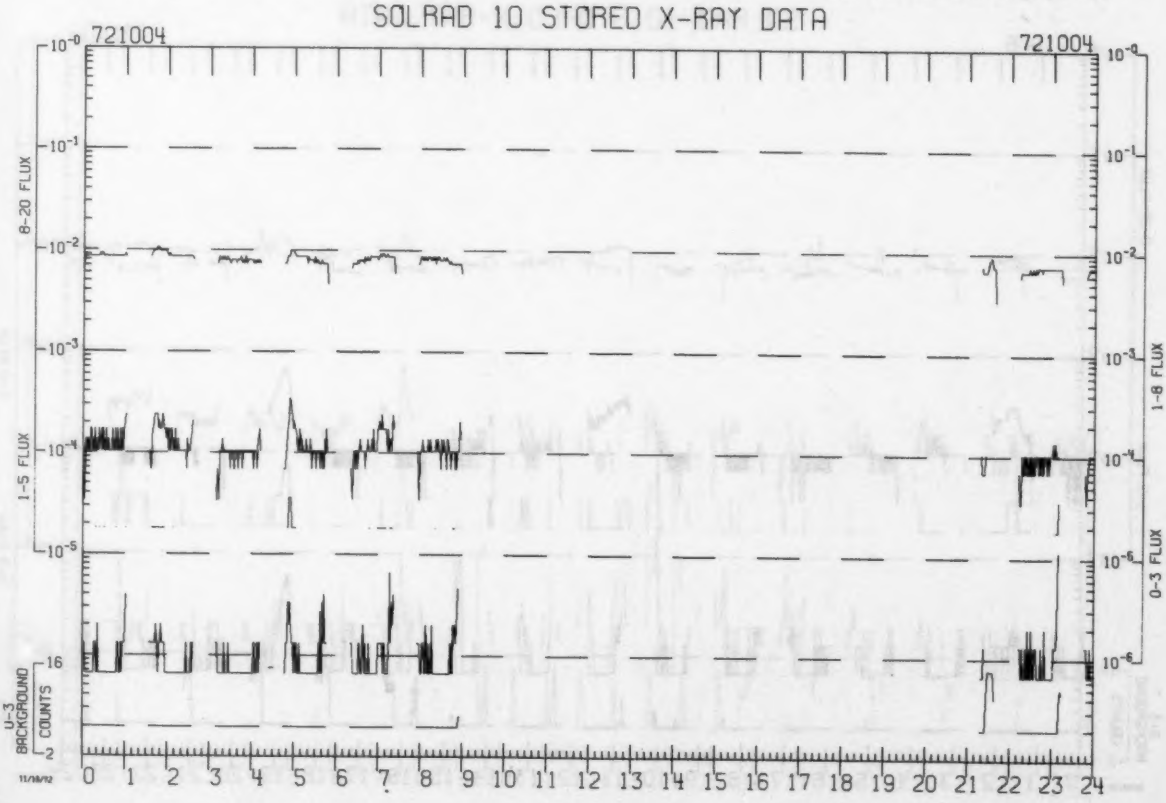

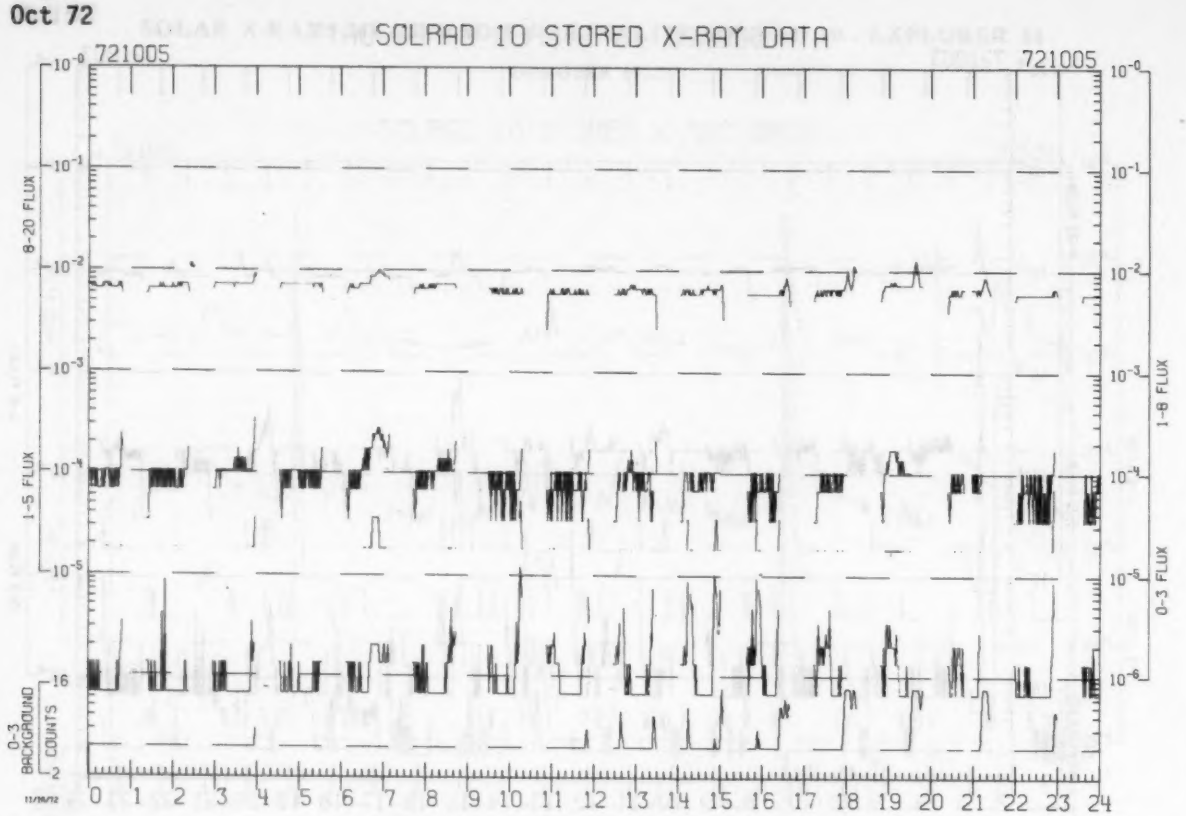
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721005
721005
8-20 FLUX
1-5 FLUX
1-8 FLUX
0-3 FLUX
0-3 BACKGROUND COUNTS
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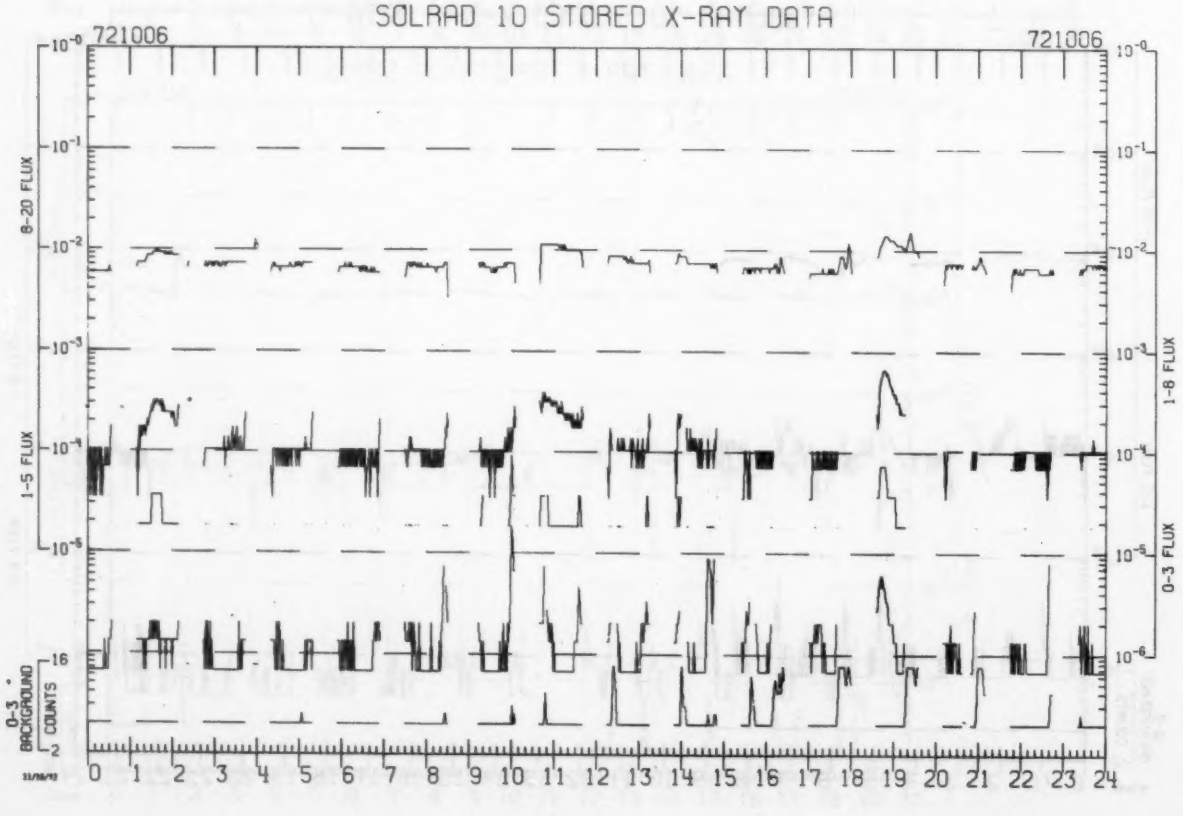
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721006
8-20 FLUX
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0-3 FLUX
0-3 BACKGROUND COUNTS
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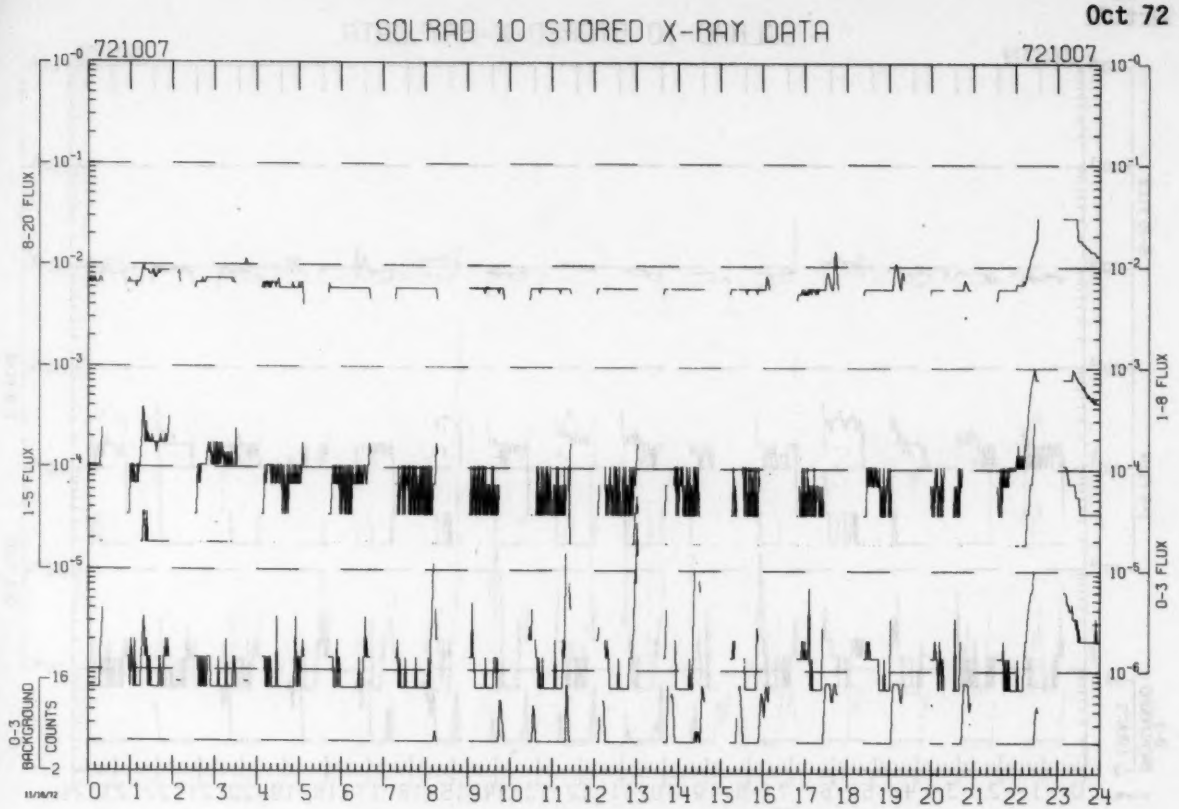
SOLRAD 10 STORED X-RAY DATA
721007
721007
8-20 FLUX
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0-3 BACKGROUND COUNTS
11/30/72
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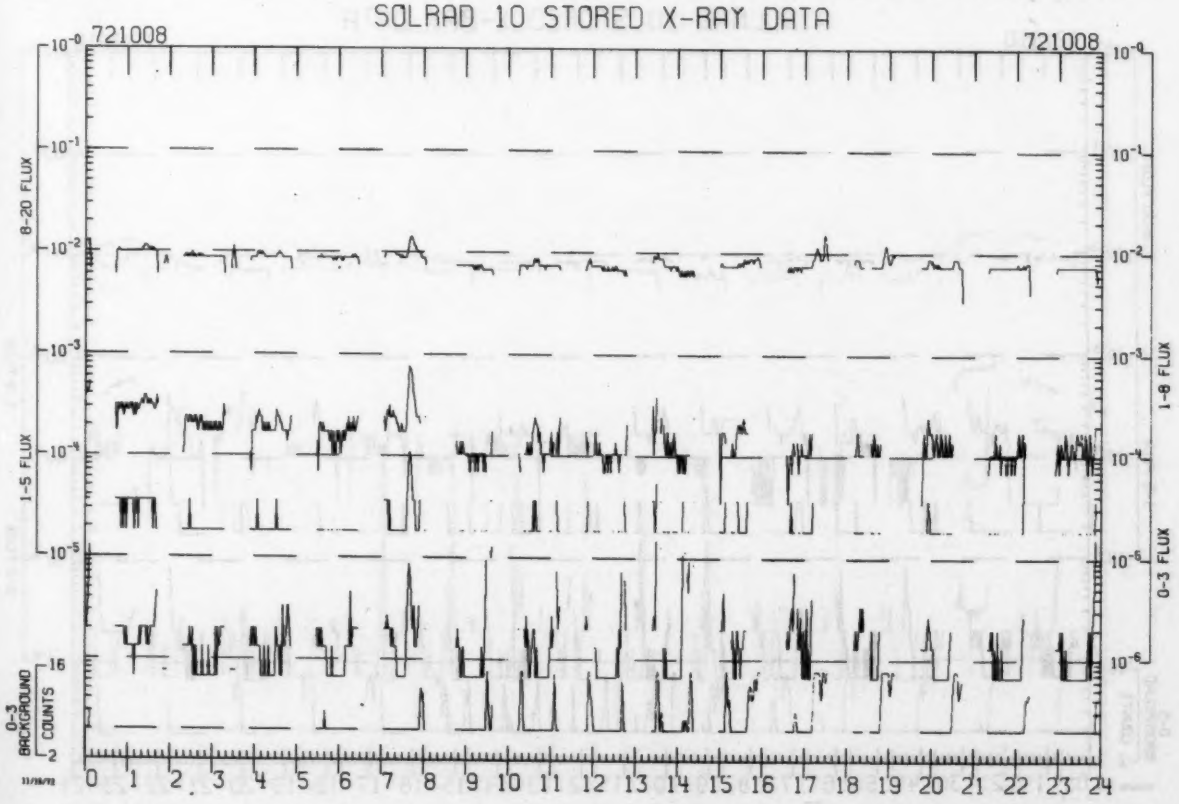
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721008
8-20 FLUX
1-5 FLUX
1-8 FLUX
0-3 FLUX
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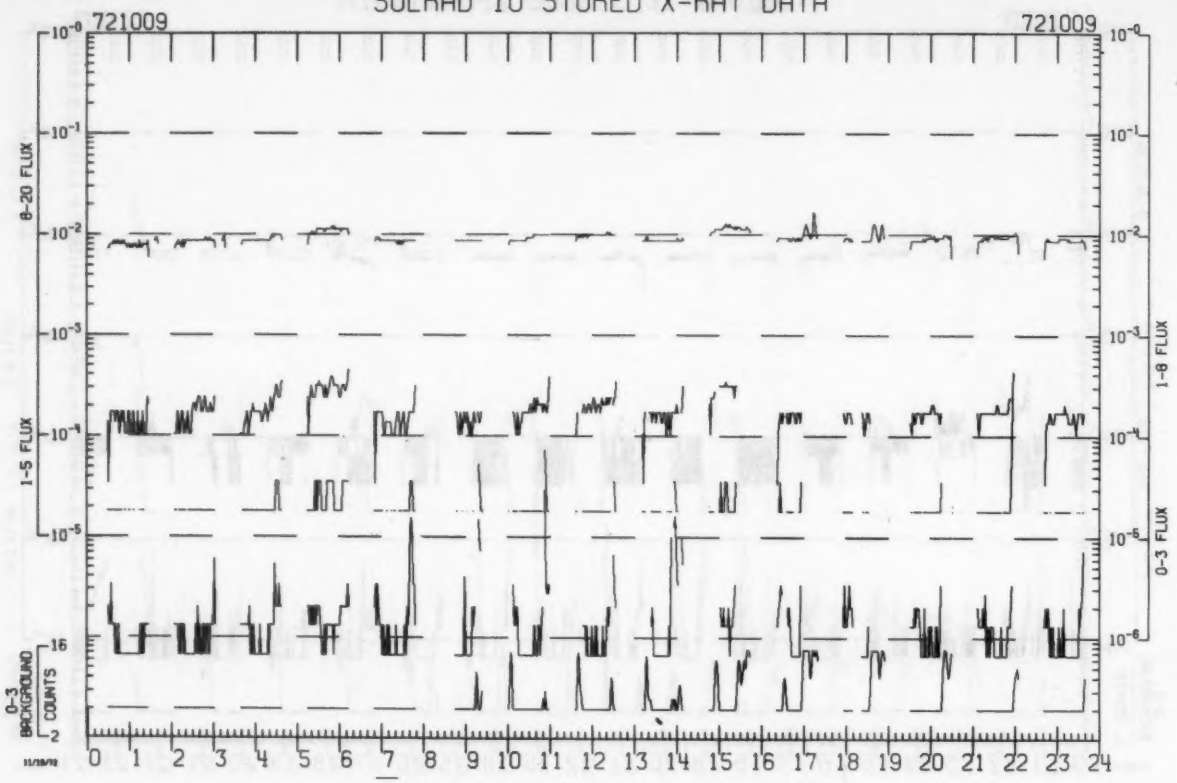
11/30/72
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

SOLRAD 10 STORED X-RAY DATA



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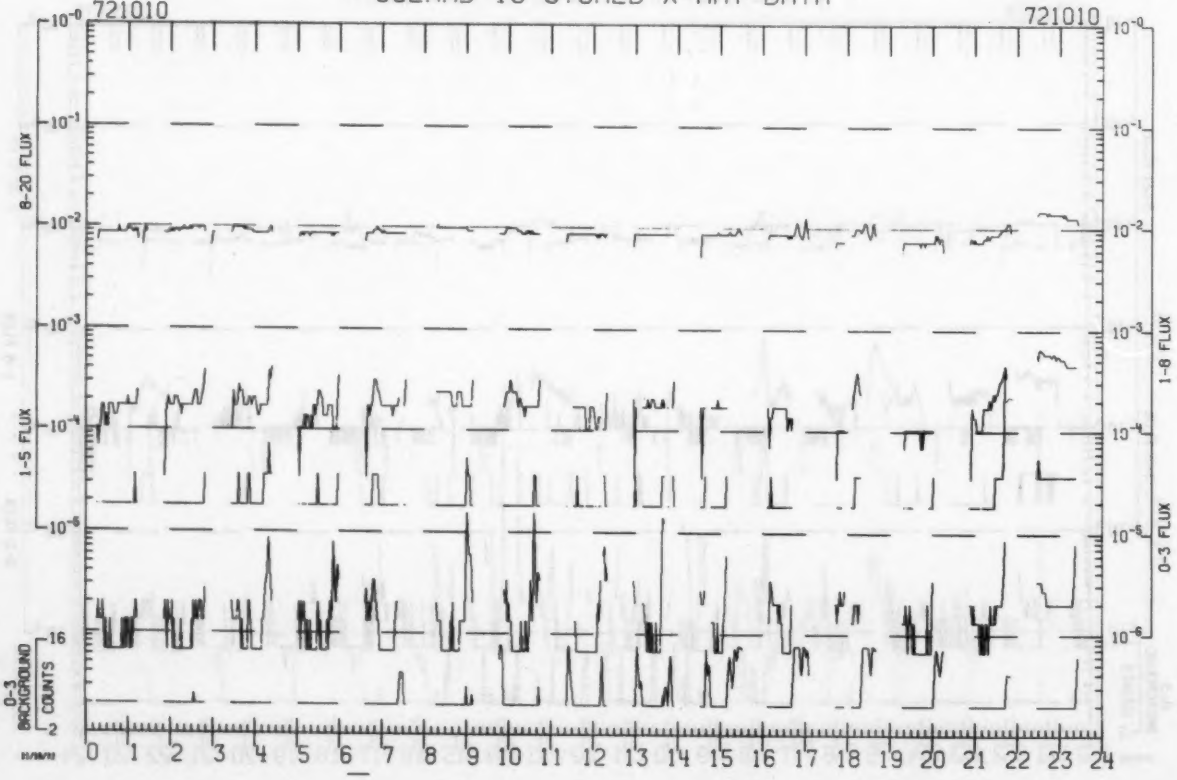

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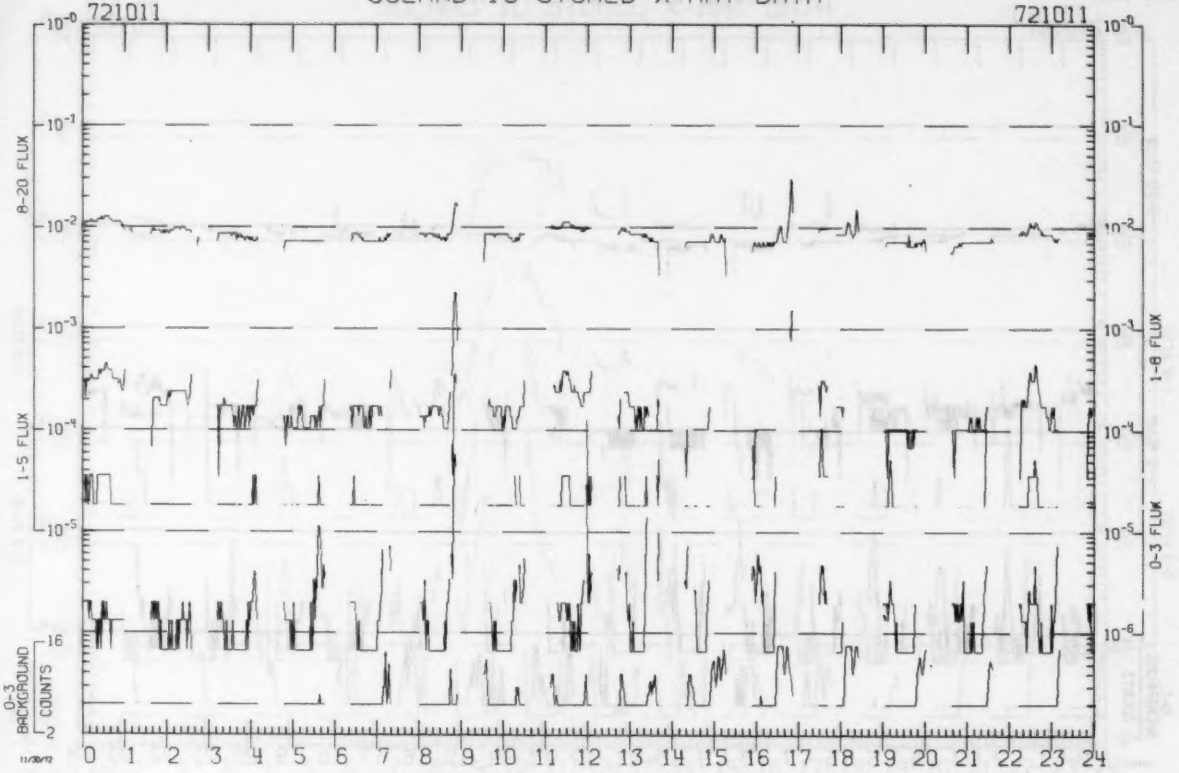

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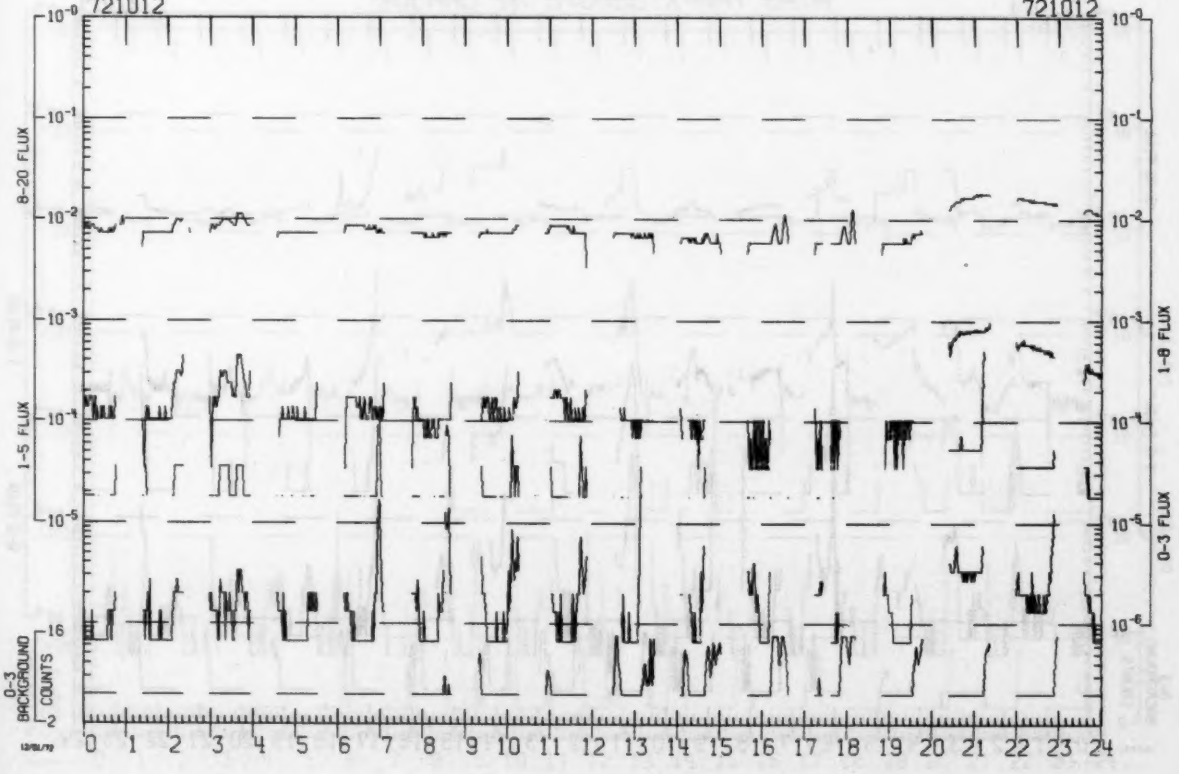

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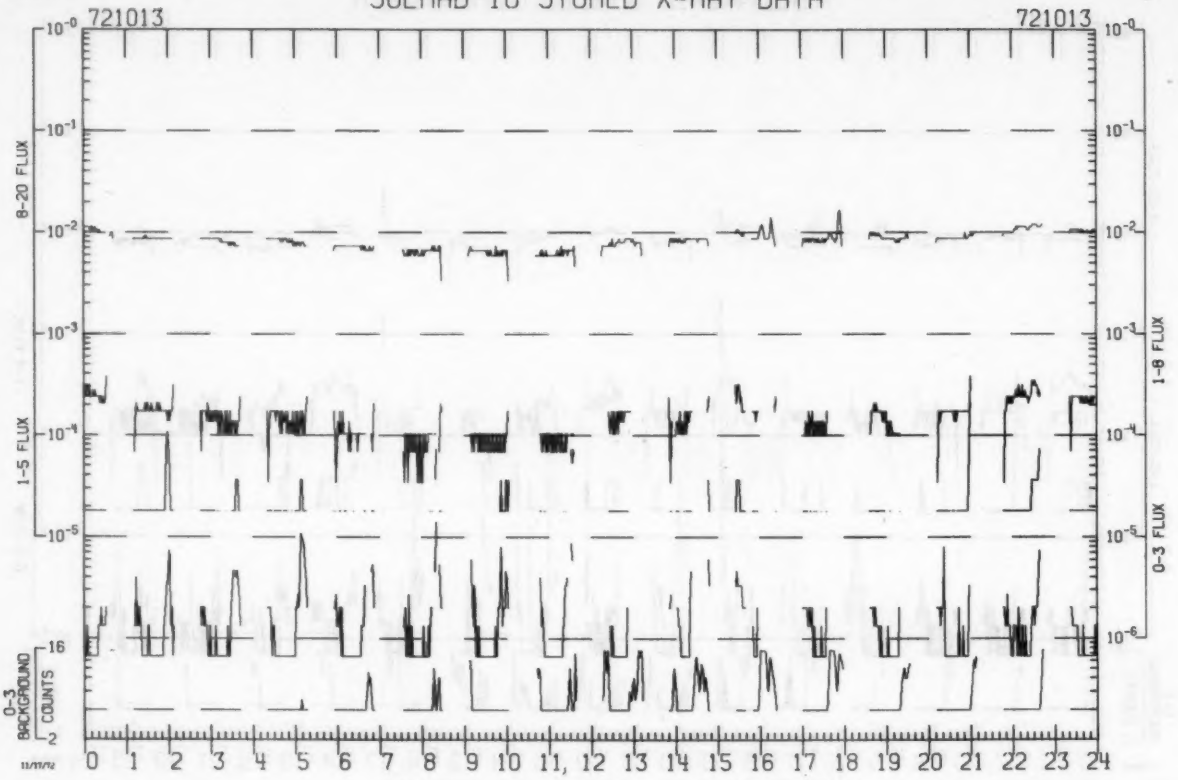
Oct 72

SOLRAD 10 STORED X-RAY DATA



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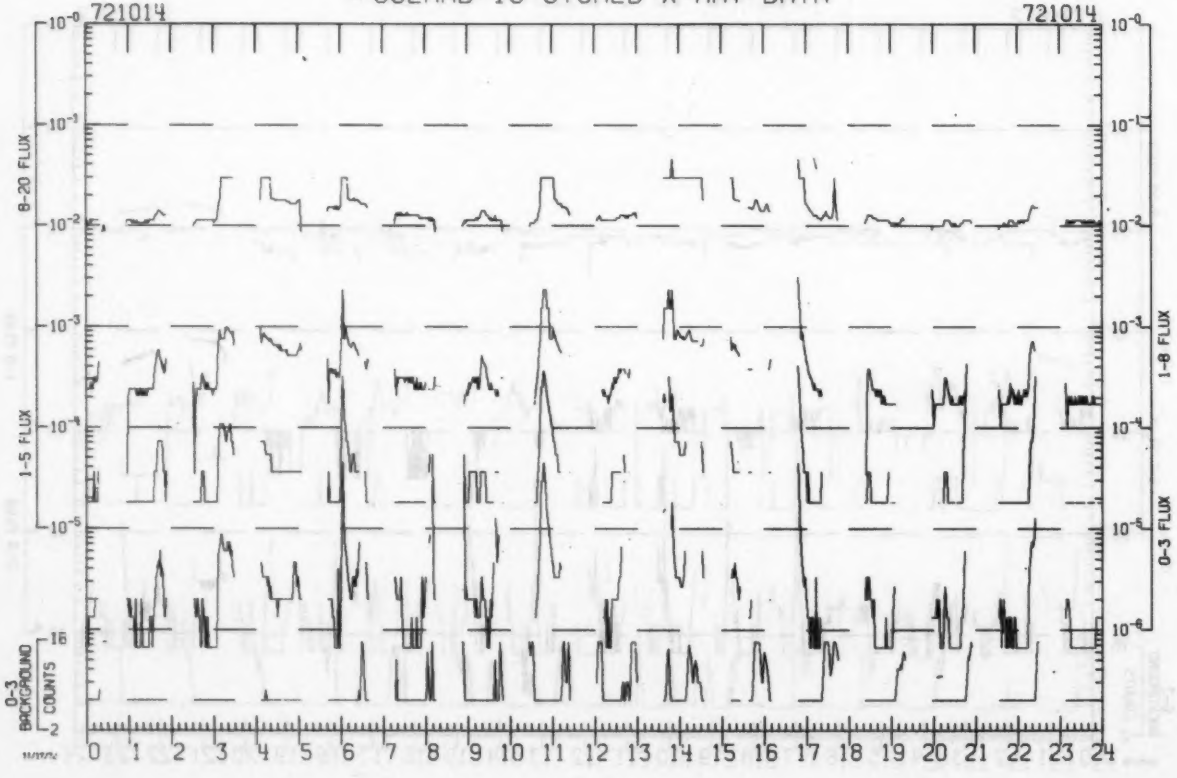

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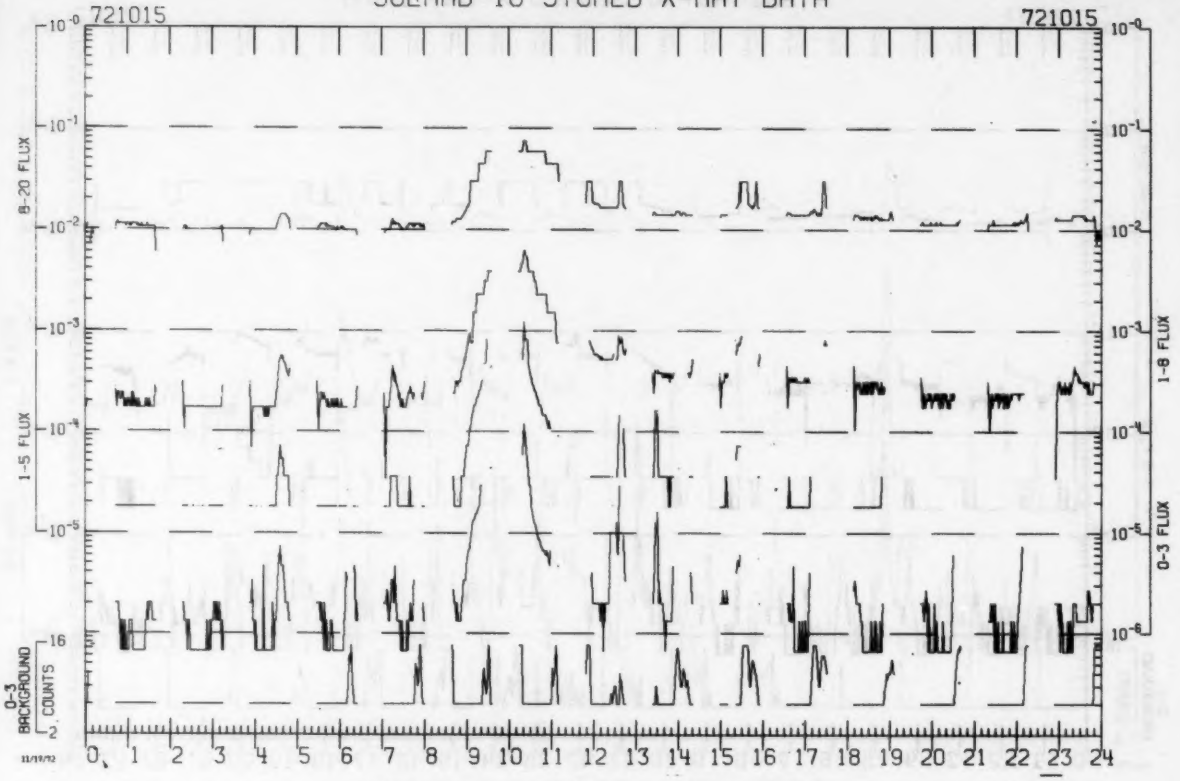

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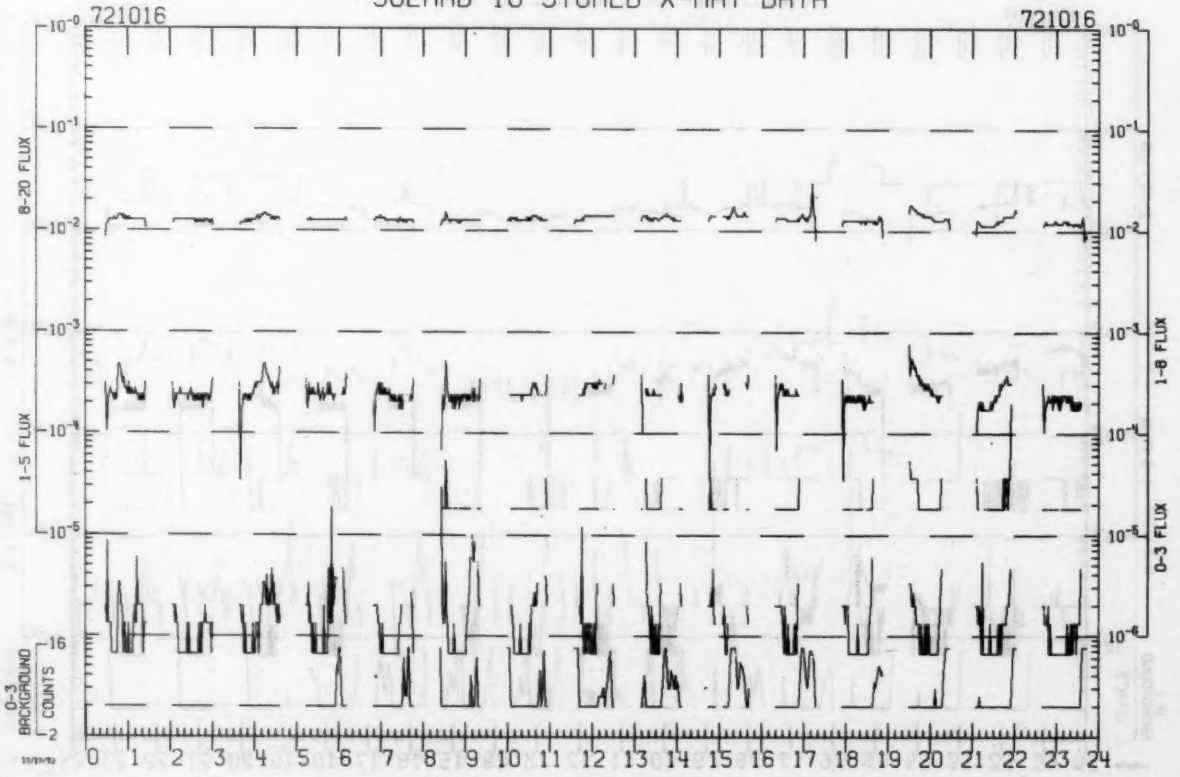

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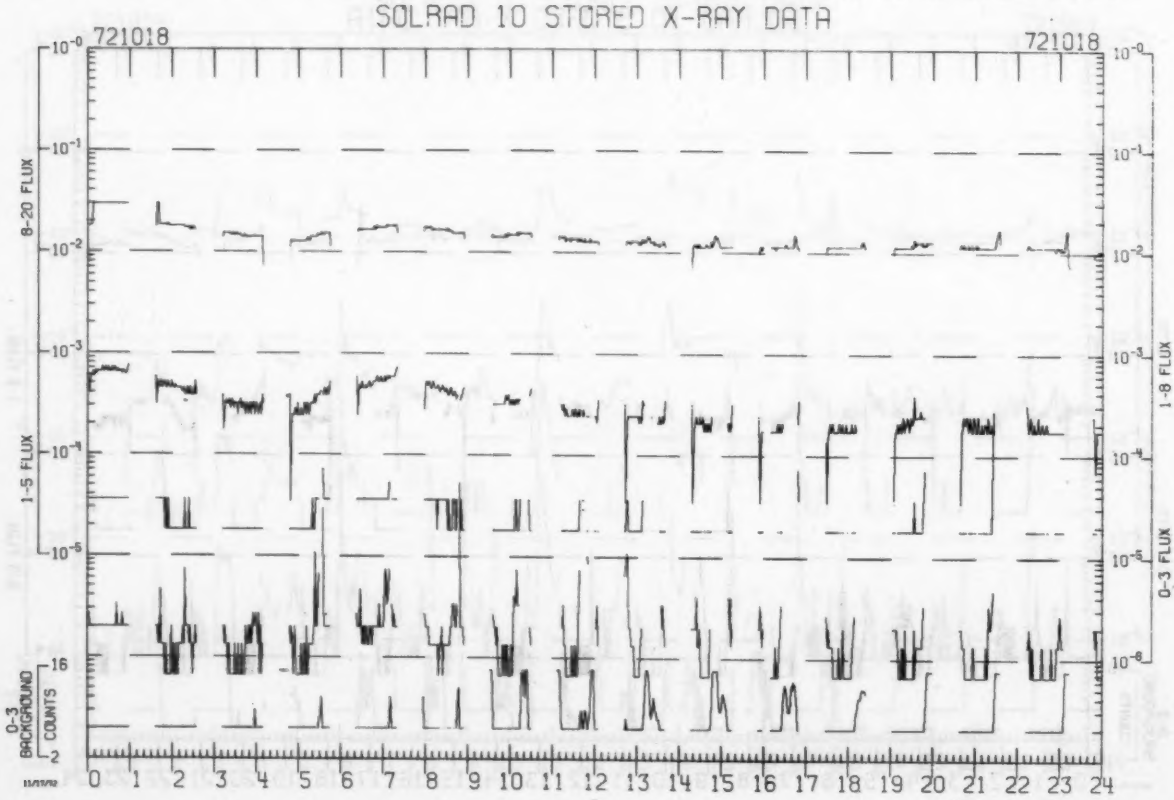
SOLRAD 10 STORED X-RAY DATA



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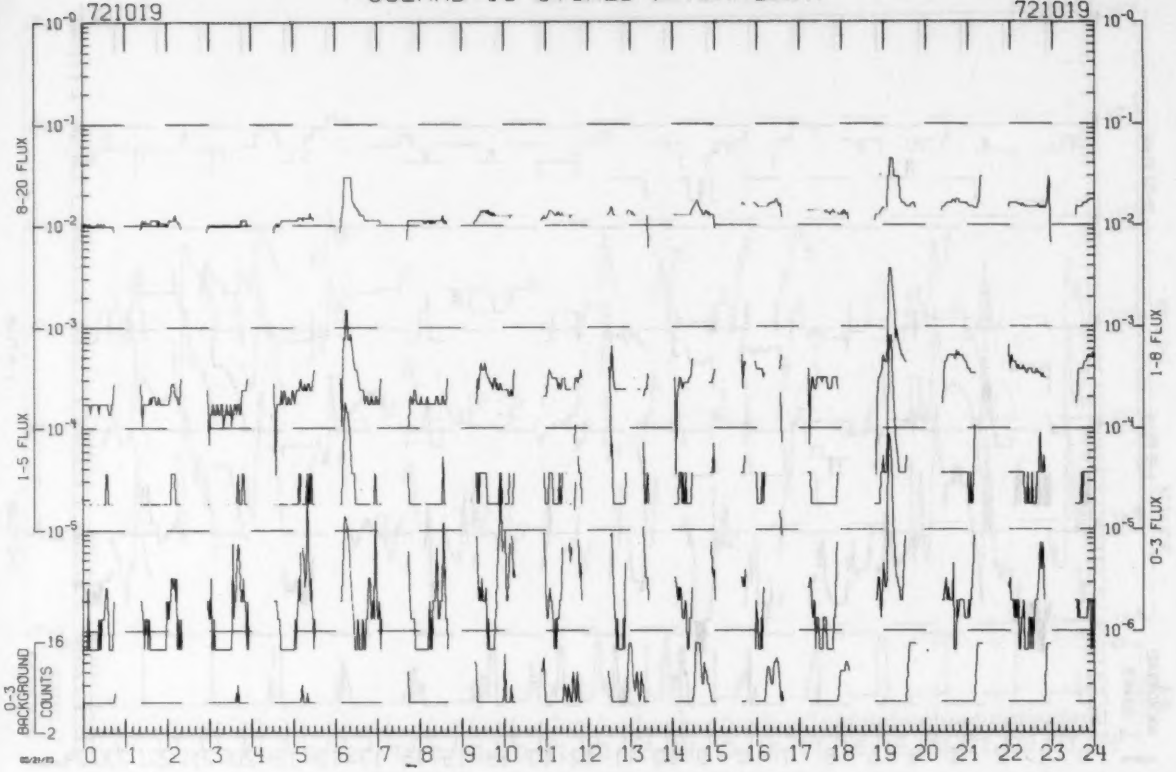

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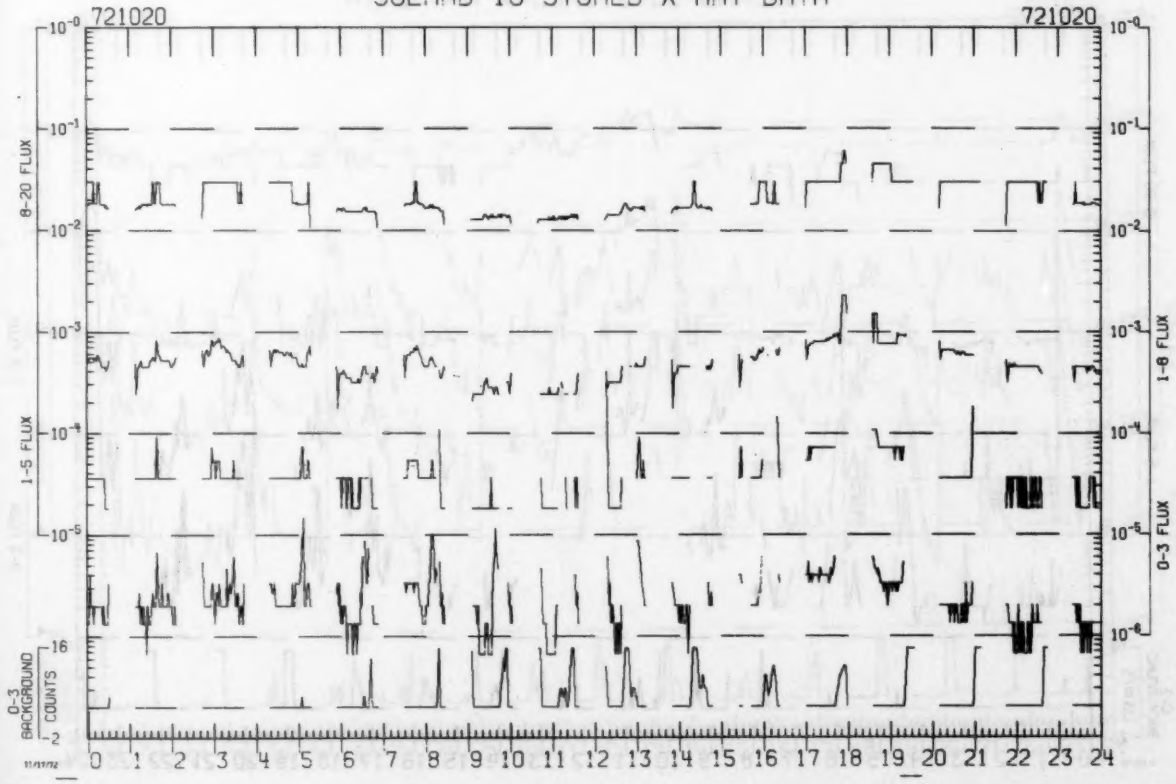

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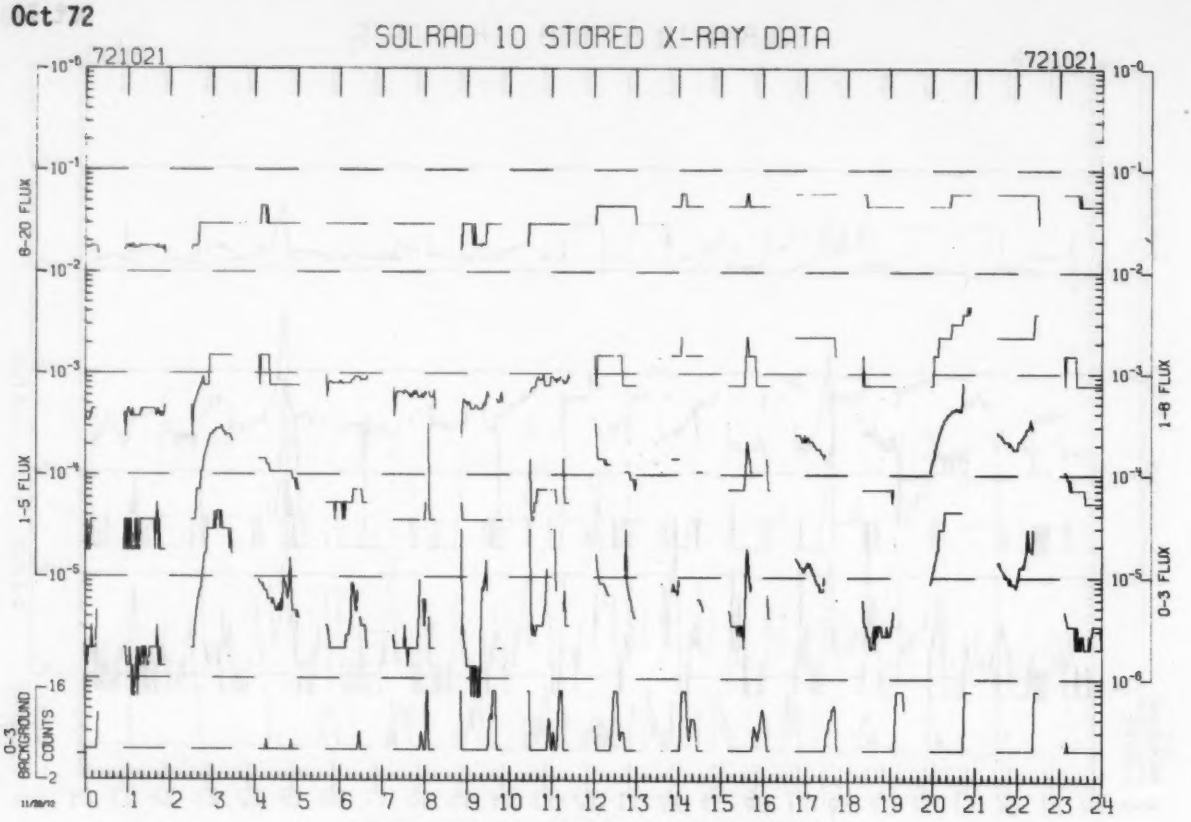
Oct 72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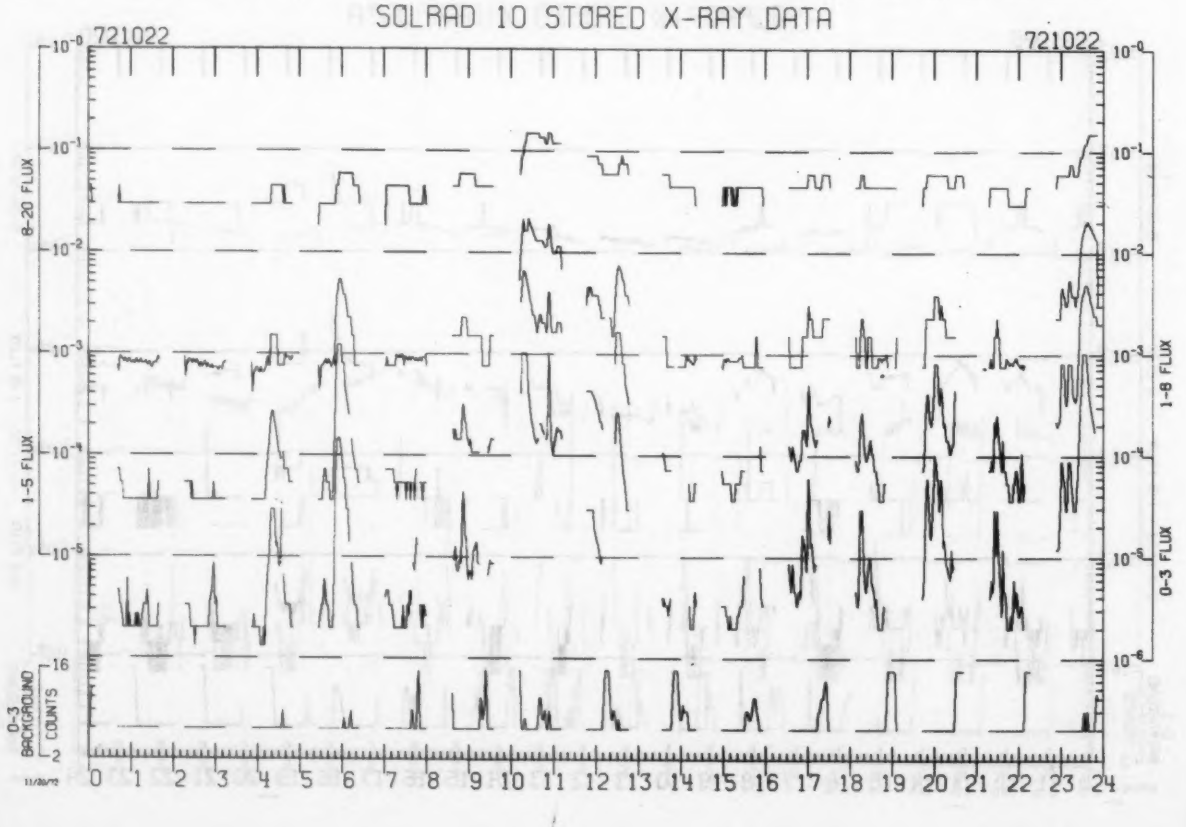
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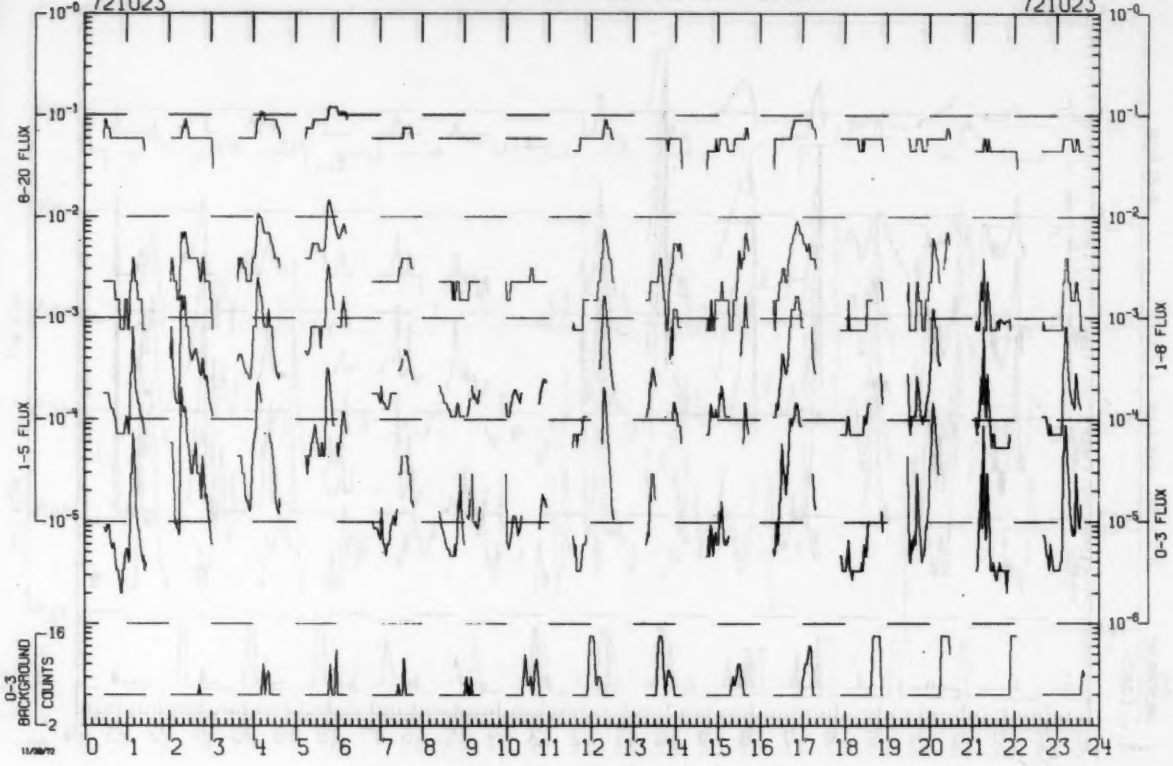

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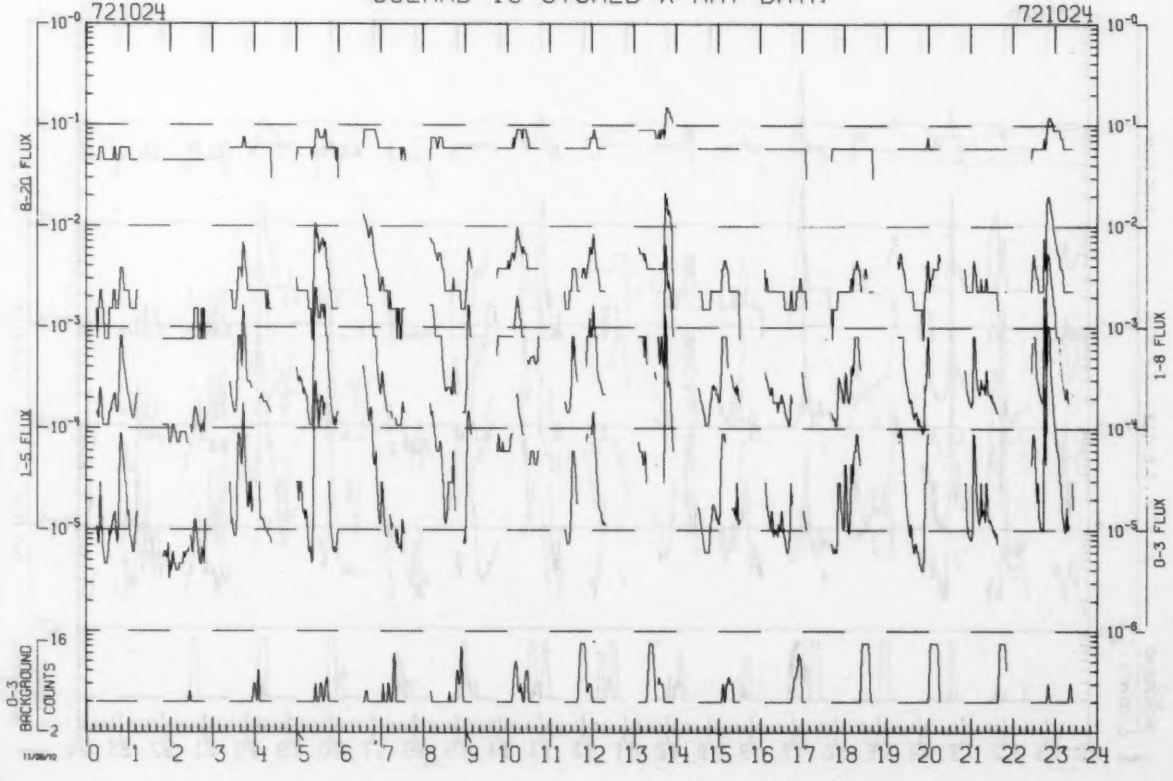

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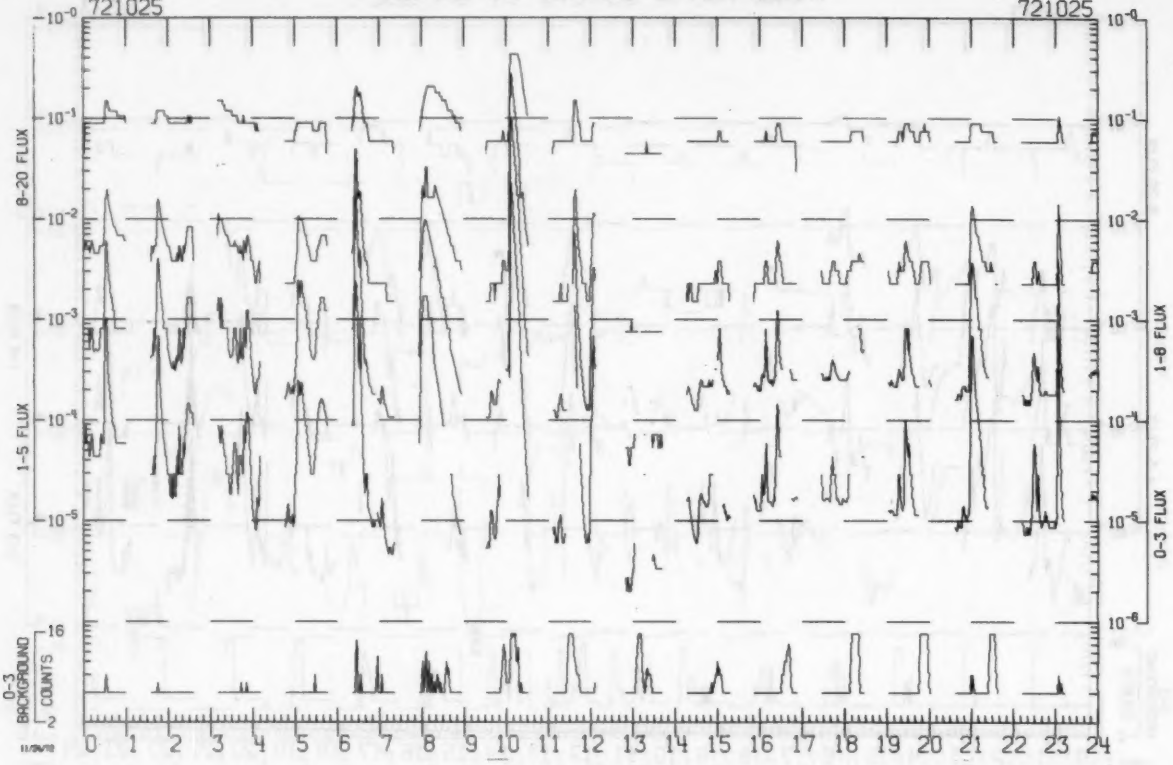

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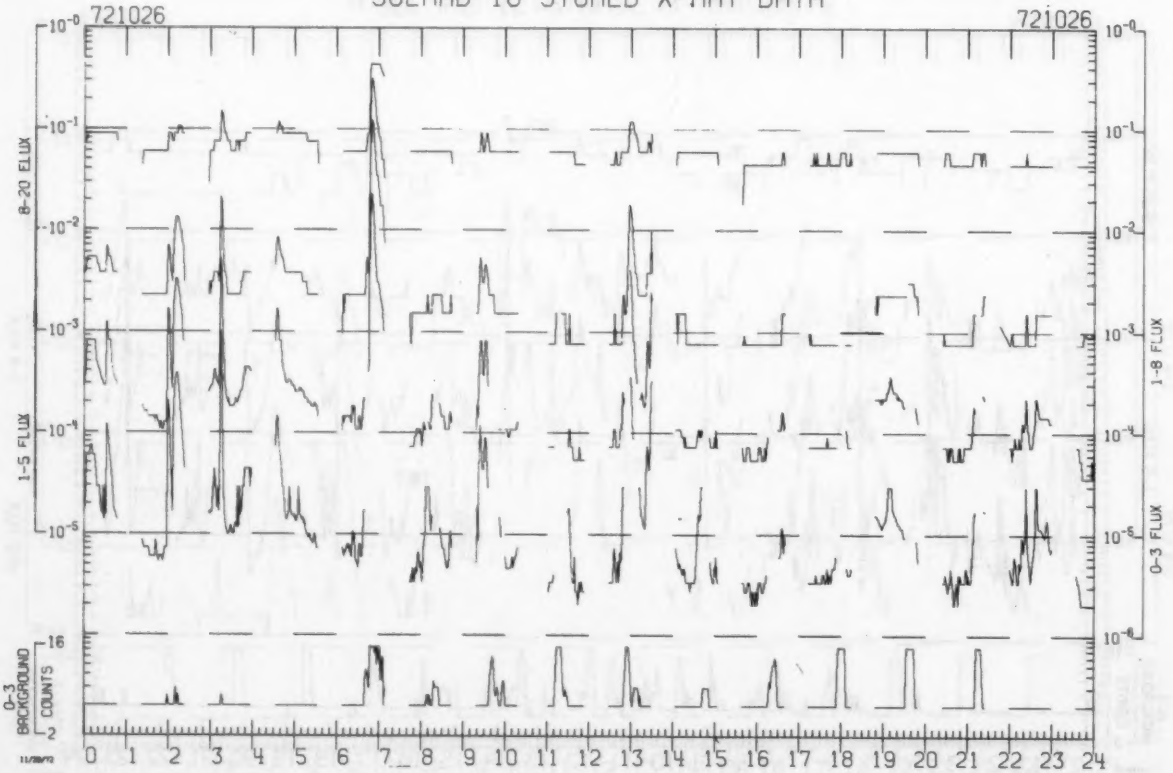

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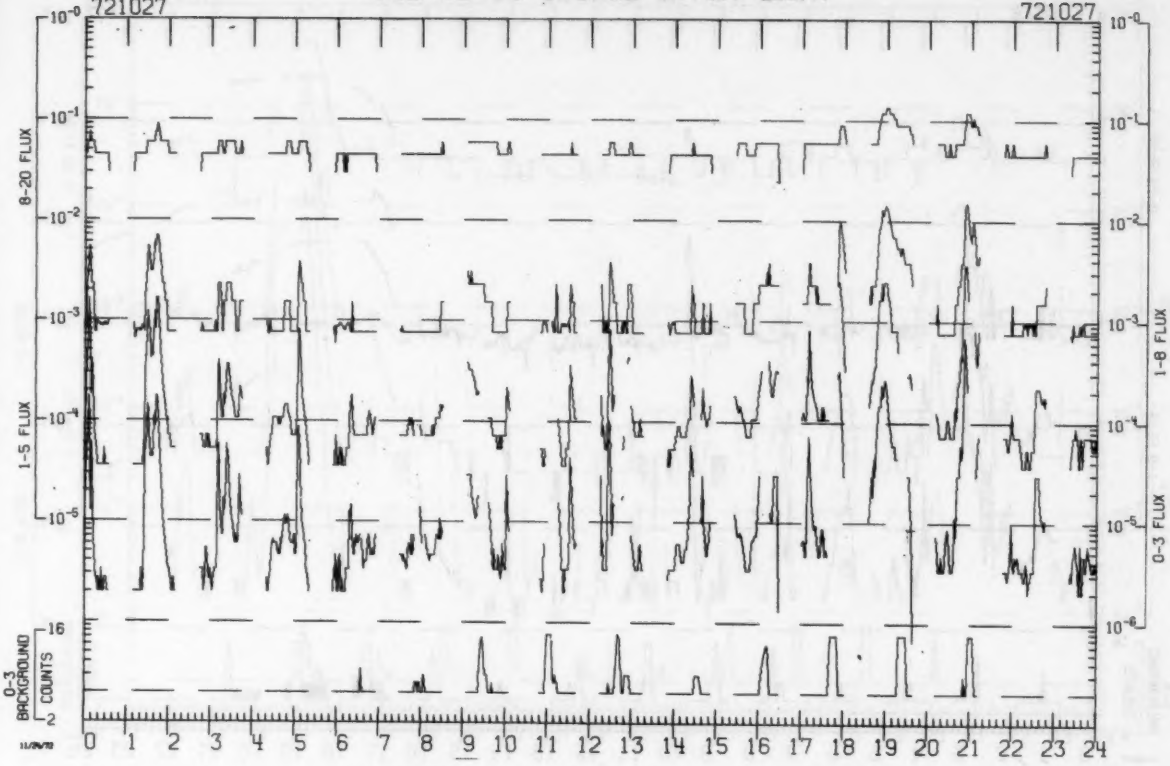

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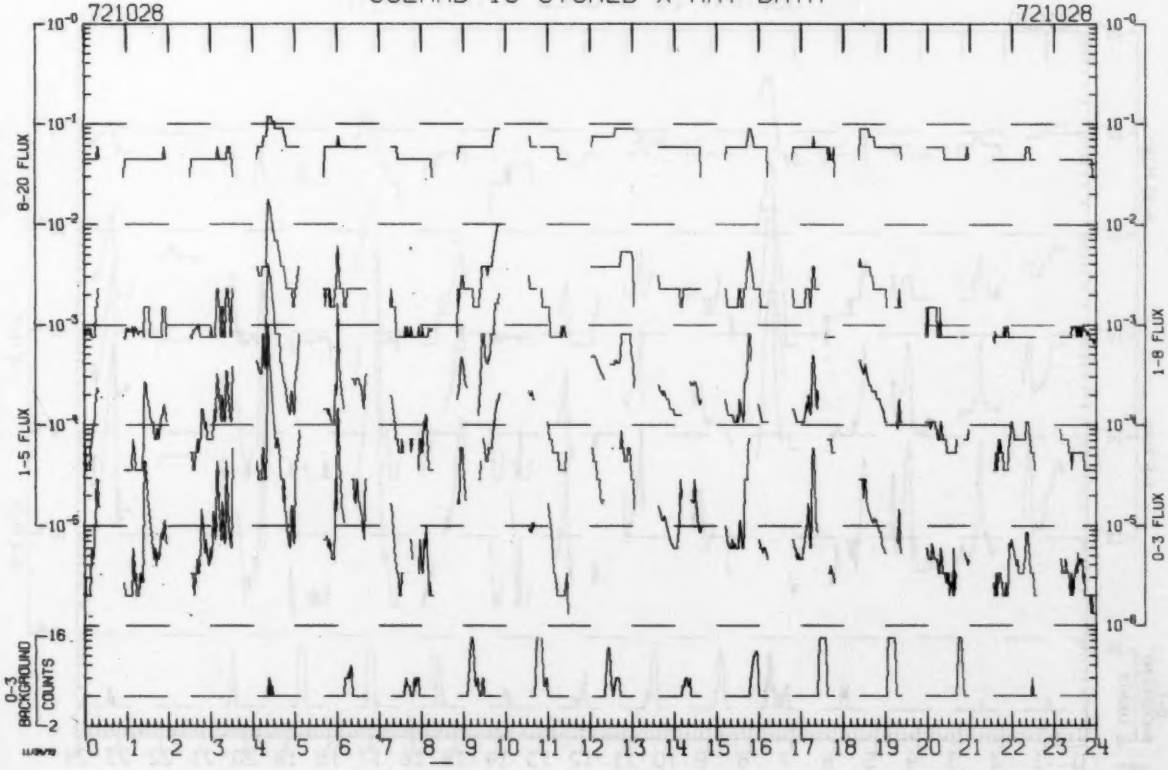

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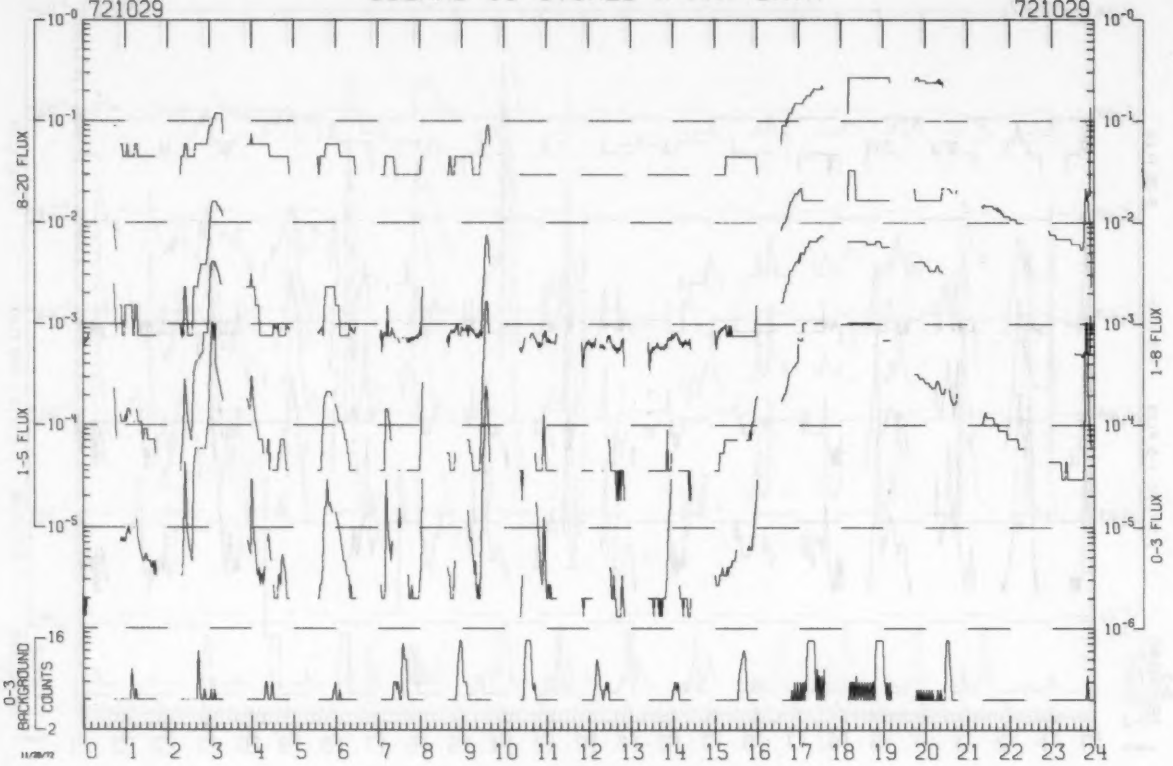

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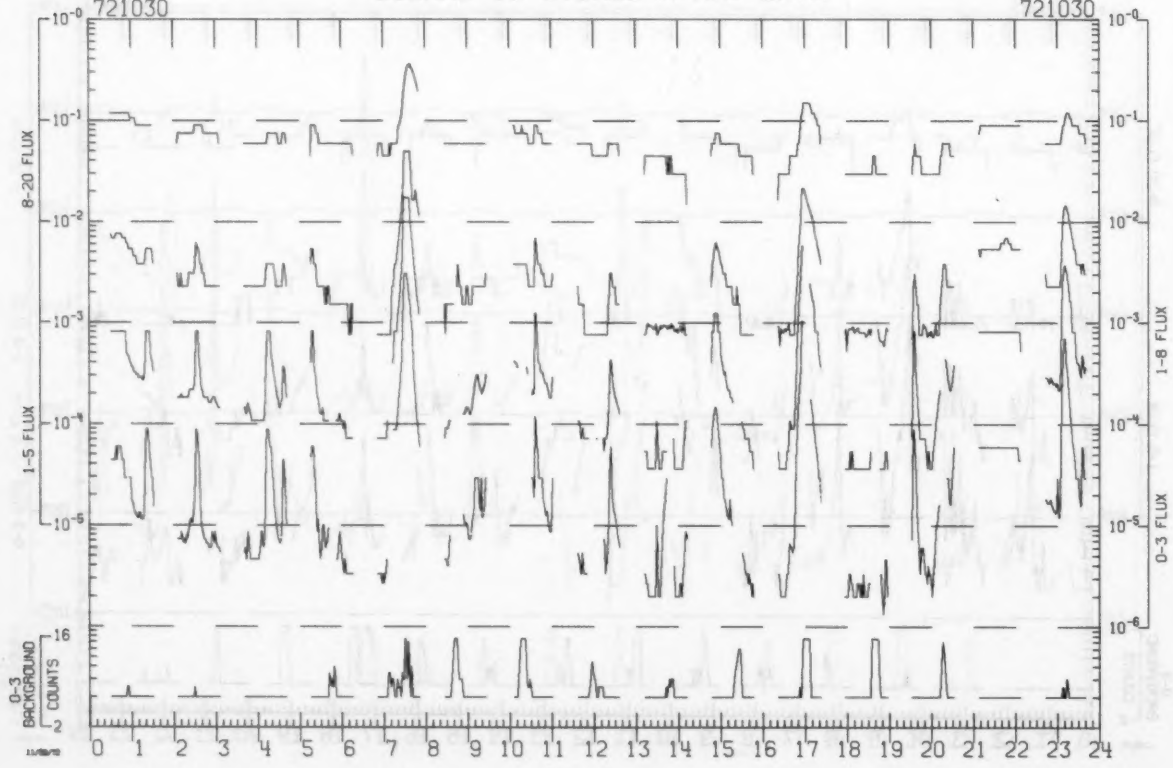

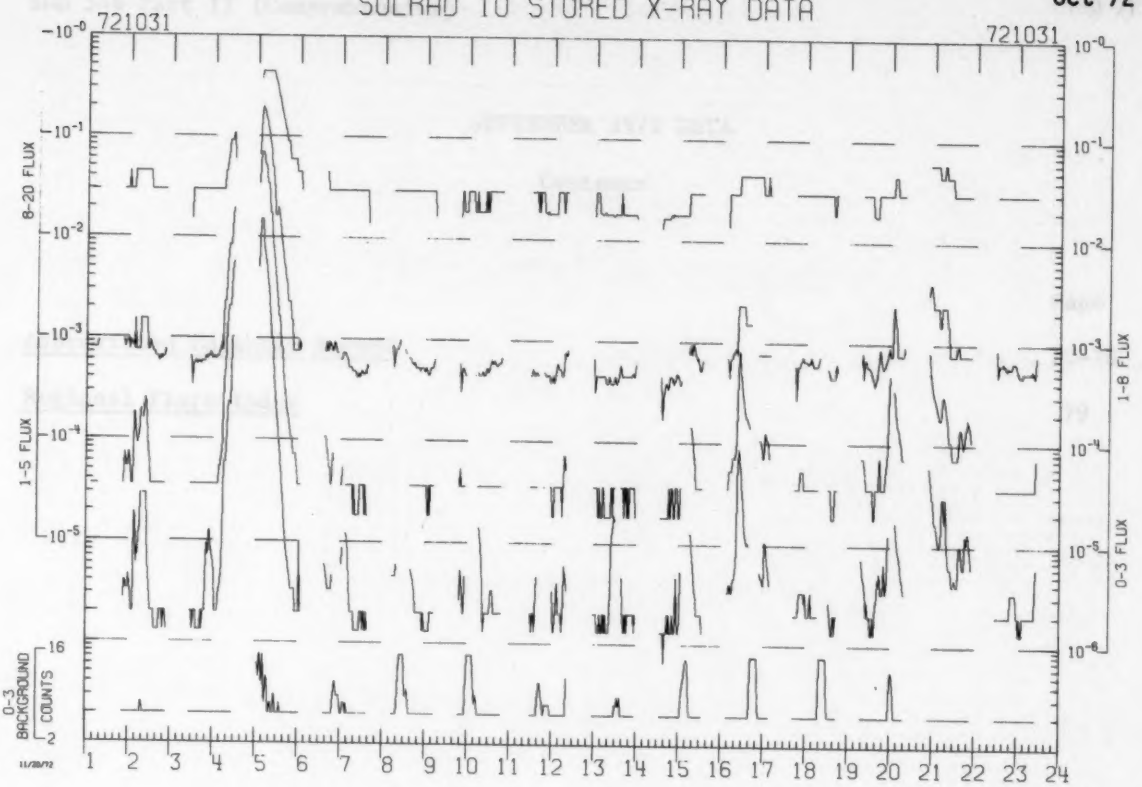
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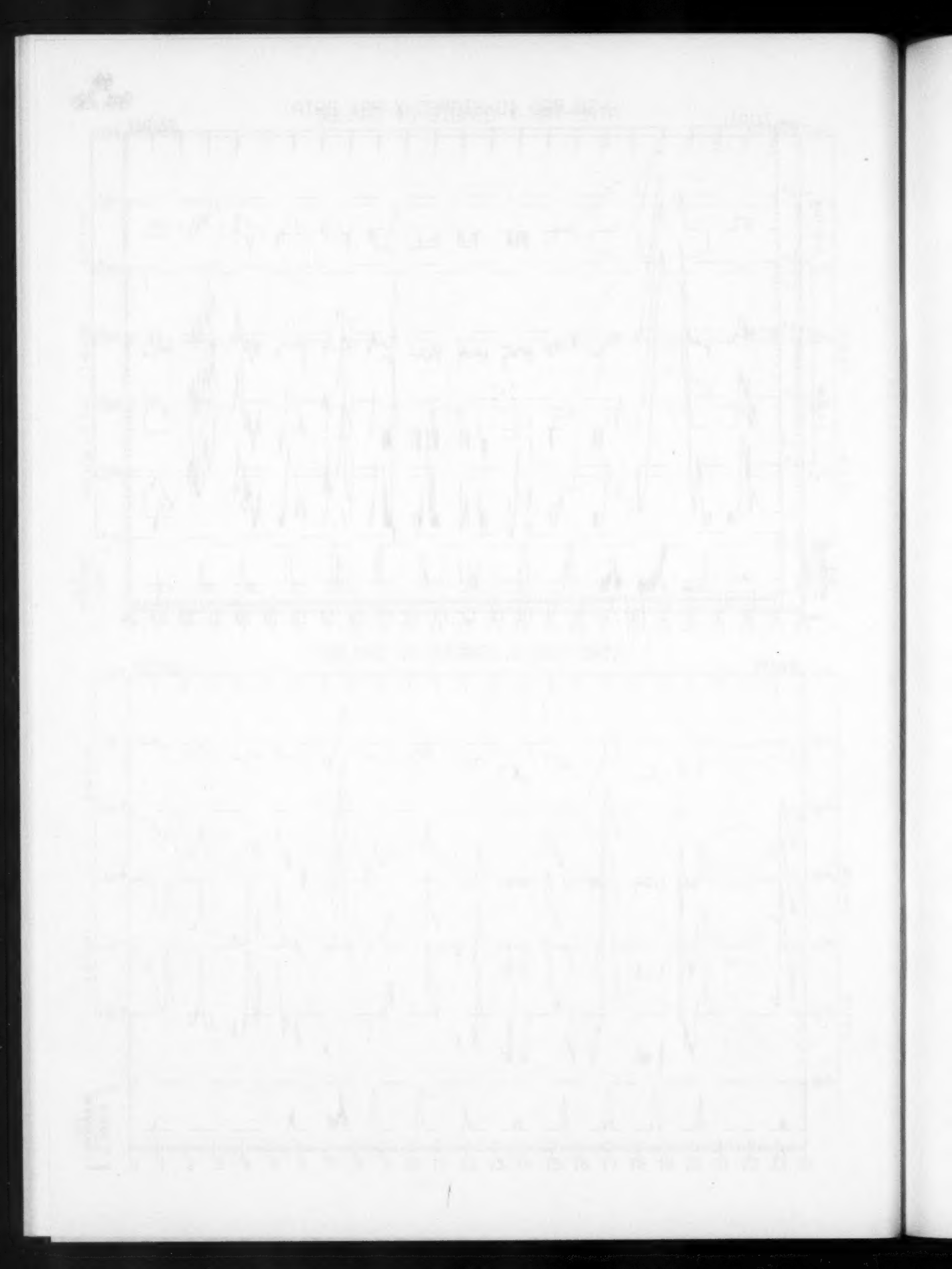

SEPTEMBER 1972 DATA

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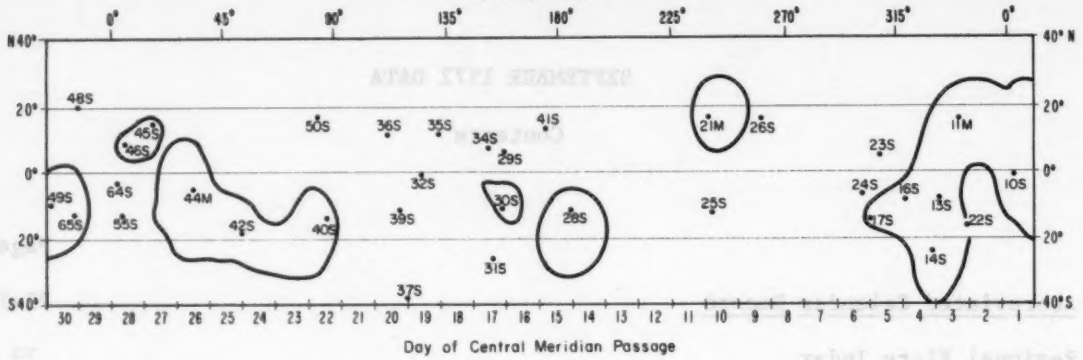
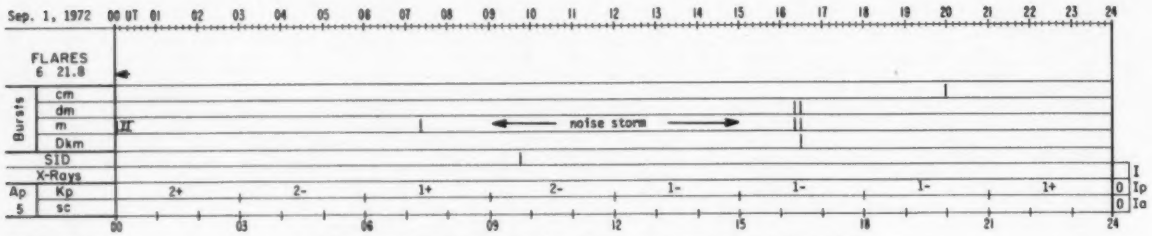
For explanations of the data contained herein see "Descriptive Text" published as supplement to February 1973 "Solar-Geophysical Data" (Number 342).

ABBREVIATED CALENDAR RECORD

SEPTEMBER 1972

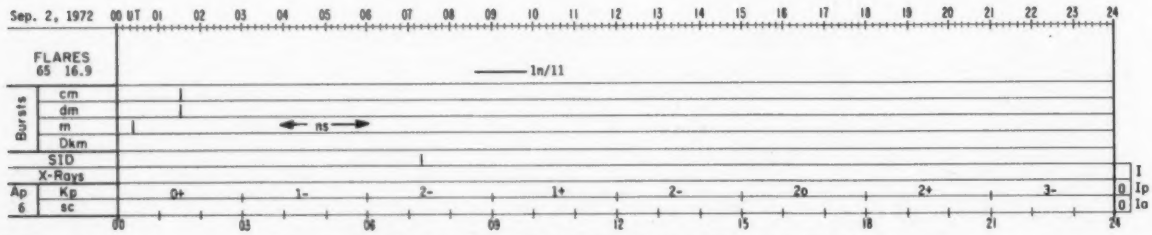


Day of Central Meridian Passage



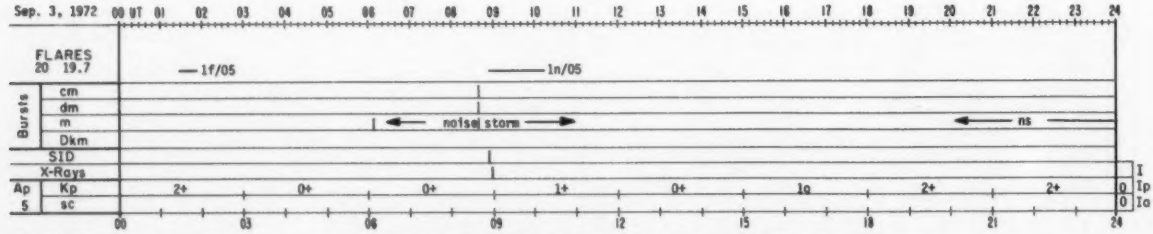
142 10 cm flux
127 (Final) Rz
CMP 12010 S01 (4)

One of five most magnetically quiet days; moderately br. green corona 7 days earlier on NE and SE limb, no coronal data 7 days later on W. limb.



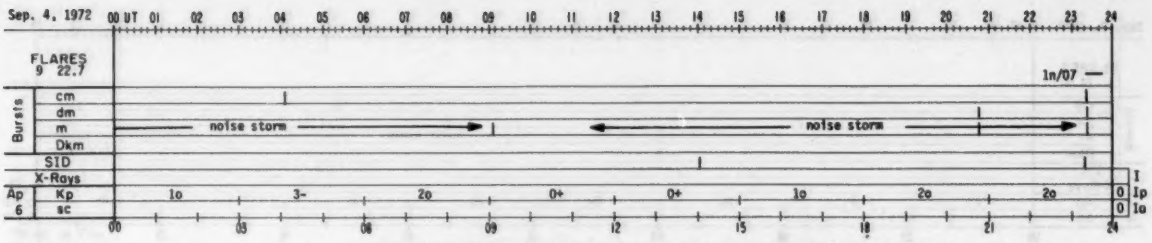
137 10 cm flux
99 Rz

Br. green corona 7 days earlier on NE limb, moderately br. green corona 7 days earlier on SE limb, no coronal data 7 days later on W. limb.



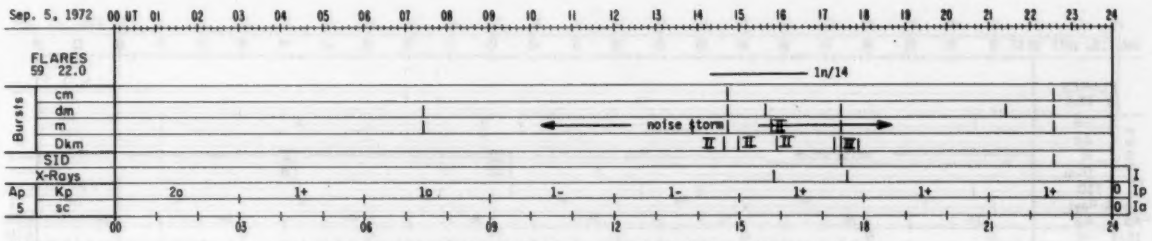
127 10 cm flux
79 Rz
CMP (12022) S16 (18974) S16 (ßp)2
12011 N17 (2) 18962 N16 ßp
18968 N15 ßp CMP Sept. 4
(18981) N14 ß
(12013) S08 (3)

One of ten most magnetically quiet days; very br. green corona 7 days later on NW and SW limb, moderately br. green corona 7 days earlier on NE and SE limb.



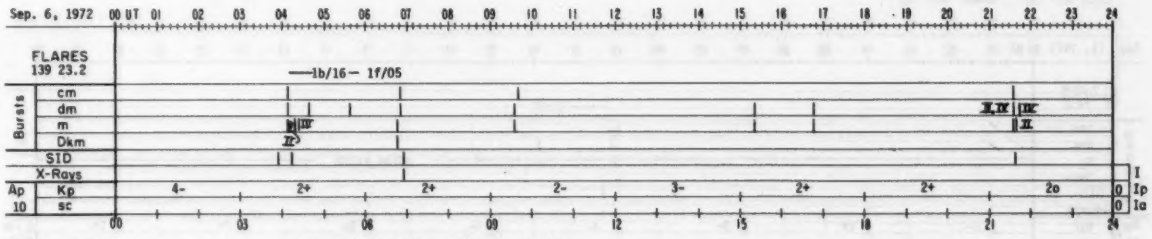
120 10 cm flux
78 Rz
CMP 12014 S24 18970 S24 (βp)2 CMP Sept. 3
12016 S08 18971 S09 (βp)3

One of ten most magnetically quiet days; very br. green corona 7 days later on SW limb, br. green corona 7 days earlier on NE and SE limb, moderately br. green corona 7 days later on NW limb.



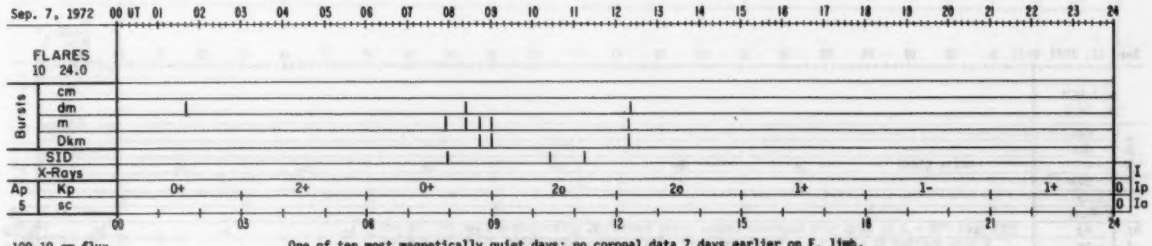
115 10 cm flux
80 Rz
CMP 12023 N05 18976 N05 β
(18983) N10 (αf)1

One of five most magnetically quiet days; no coronal data 7 days earlier on E. limb, very br. green corona 7 days later on NW limb, moderately br. green corona 7 days later on SW limb.



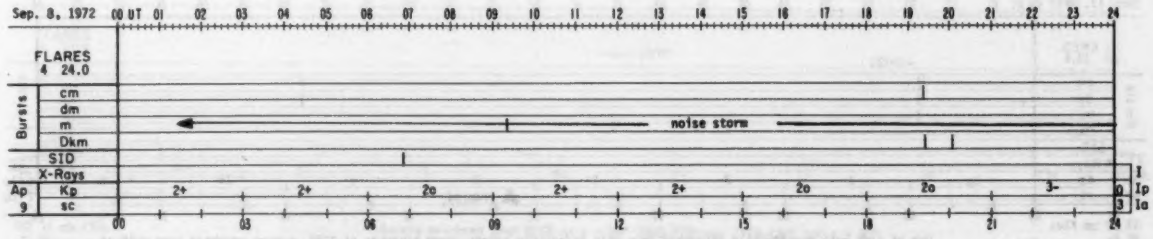
117 10 cm flux
81 Rz
CMP 12017 S13 (6)
12024 S07 18975 S06 β

No coronal data 7 days earlier on E. limb.



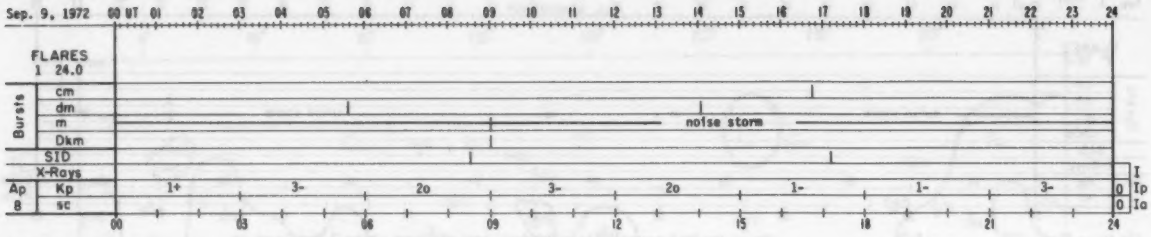
109 10 cm flux
73 Rz

One of ten most magnetically quiet days; no coronal data 7 days earlier on E. limb, nor 7 days later on W. limb.



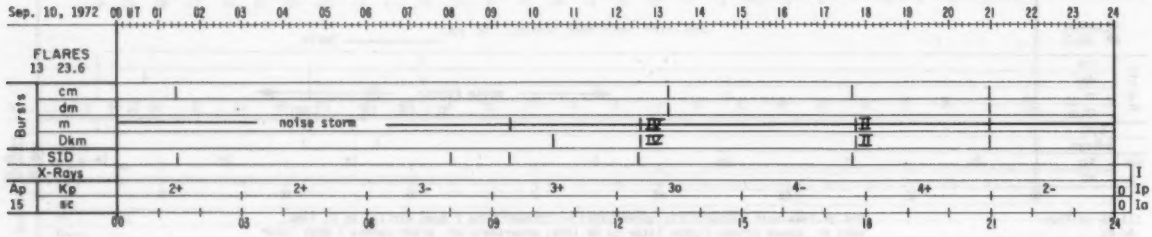
114 10 cm flux
71 Rz

No coronal data 7 days later on W. limb.



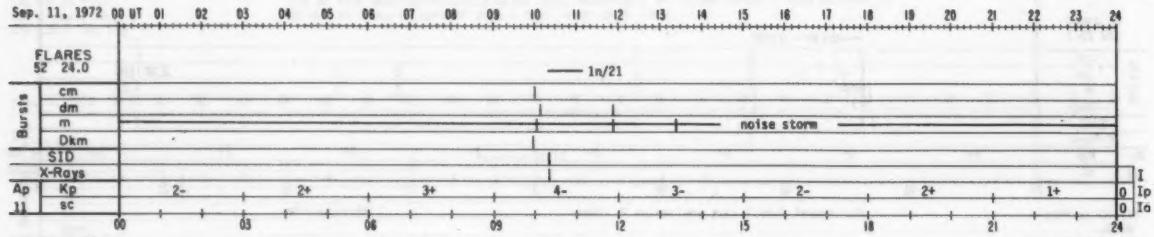
111 10 cm flux
59 Rz
CMP 12026 N17 18977 N18 βp
(18979) N18

No coronal data 7 days later on W. limb.

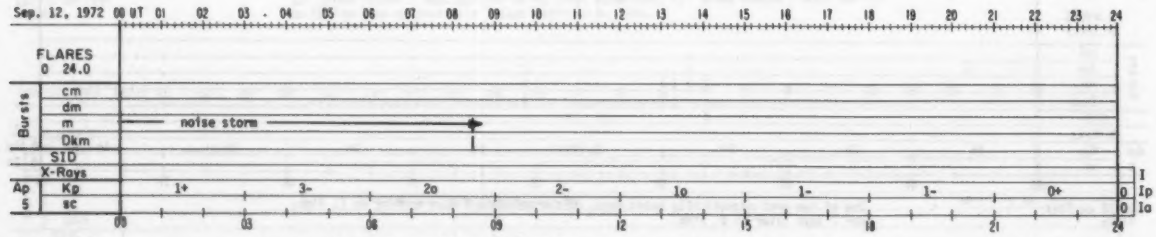


106 10 cm flux
46 Rz
CMP 12025 S12 (4) 18978 S03 α CMP Sept. 9
(18985) S11 (βp)1 CMP Sept. 11
12021 N17 (3) 18980 N20 βp

Moderately br. green corona 7 days earlier on NE and SE limb

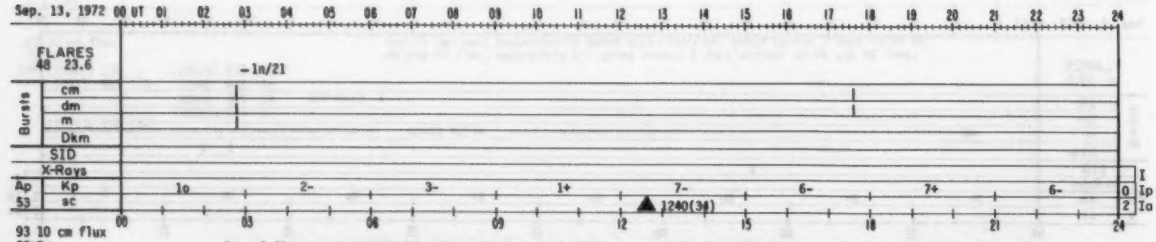


101 10 cm flux
43 Rz



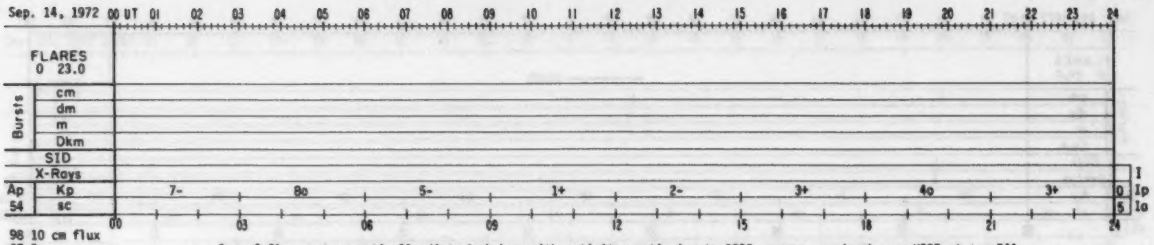
99 10 cm flux
36 Rz

One of ten most magnetically quiet days.



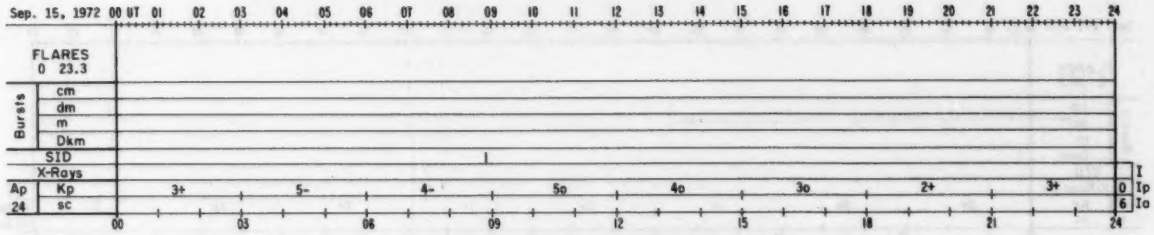
93 10 cm flux
32 Rz

One of five most magnetically disturbed days with moderately severe storm after sc at 1240, aurora overhead over USSR at ϕ = 58° 1500, auroral display persisted over whole area of W. Europe from 2000 until dawn with a rayed arc with base overhead to ϕ = 61-62° and rays overhead to ϕ = 59°, changing to a homogeneous arc at 2240 and returning to a rayed arc again at about 0250 with rays visible to ϕ = 52° 2200; no coronal data 7 days earlier on E. limb, br. green corona 7 days later on SW limb.



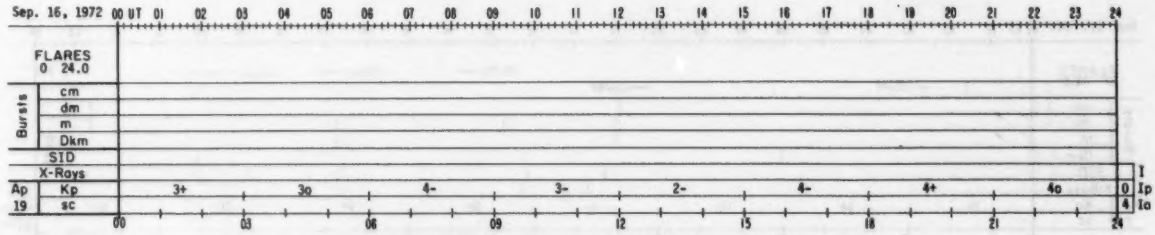
98 10 cm flux
37 Rz

One of five most magnetically disturbed days with activity continuing to 0900; aurora overhead over USSR at ϕ = 54° 1400-1500, ϕ = 56° 1500-1700 and 2200-2300, and ϕ = 60° 1800-1900, auroral display persisted over whole area of W. Europe from 2000 Sept. 13 until dawn with a rayed arc becoming homogeneous at 2240 and returning to a rayed arc again at about 0250 with rays visible to ϕ = 48° 0320; moderately br. green corona 7 days later on SW limb.



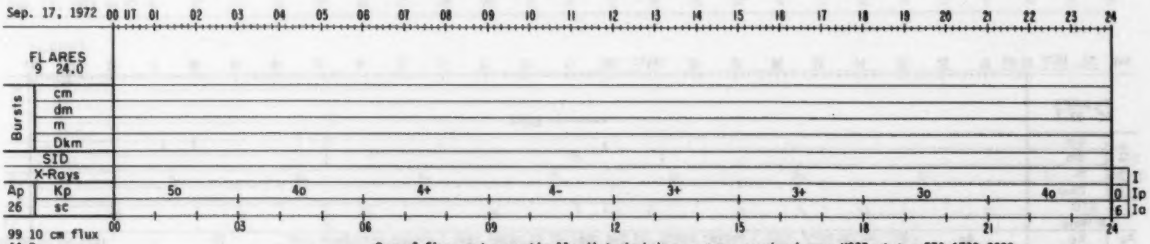
102 10 cm flux
45 Rz
CMP 12028 S12 (2) 18982 S12 (βp)4 CMP Sept. 14
18988 S07 (αp)1 CMP Sept. 14
(12041) N13

One of five most magnetically disturbed days; auroral glow on horizon over W. Europe seen to ϕ = 58° 0215; no coronal data 7 days earlier on E. limb, moderately br. green corona 7 days later on SW limb.



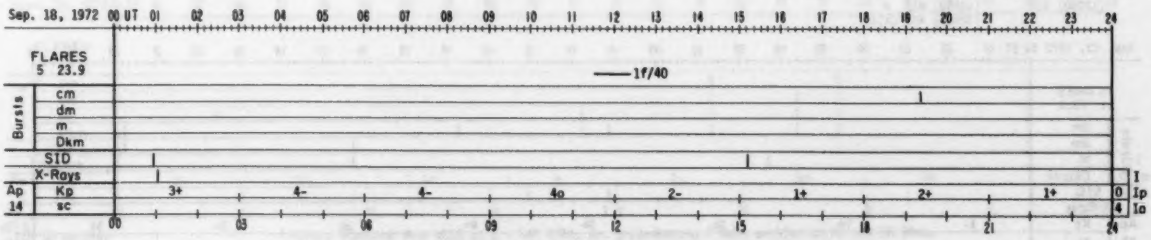
102 10 cm flux
53 Rz

Homogeneous auroral arc, sometimes rayed, seen close to horizon over W. Europe to ϕ = 60° 2150-0350 with glow on horizon visible to ϕ = 56°; no coronal data 7 days earlier on E. limb, nor 7 days later on W. limb.



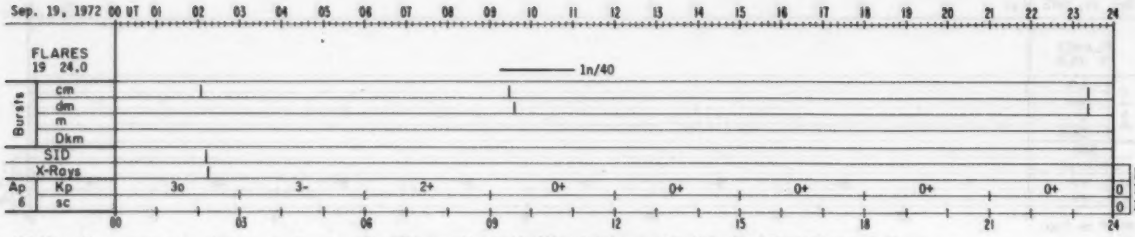
99 10 cm flux
44 Rz
CMP 12029 N07 (3)
12030 S11 18984 S09 (βp)4 CMP Sept. 16
12031 S27 (2)
12034 N07 18986 N07 (βf)2

One of five most magnetically disturbed days; aurora overhead over USSR at ϕ = 57° 1700-2000 and ϕ = 59° 2300, homogeneous auroral arc, sometimes rayed, seen close to horizon over W. Europe to ϕ = 60° to 0350 with glow on horizon visible to ϕ = 56°; very br. green corona 7 days later on NW limb, br. green corona 7 days later on SW limb, moderately br. green corona 7 days earlier on NE limb.



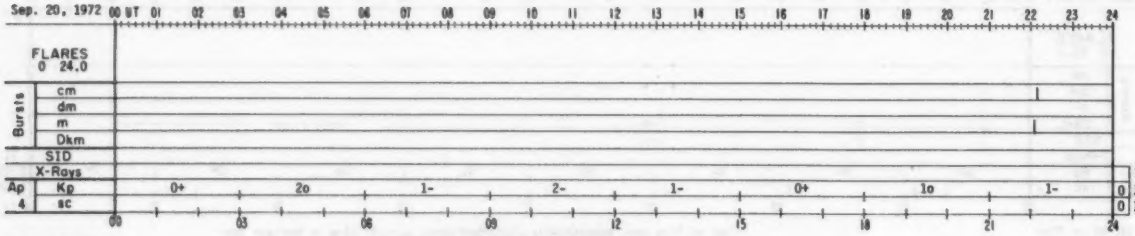
102 10 cm flux
38 Rz

Aurora overhead over USSR at ϕ = 59° 2000-2100 and 2200-2300 and ϕ = 60° 2100-2400; moderately br. green corona 7 days earlier on NE limb, no coronal data 7 days later on W. limb.



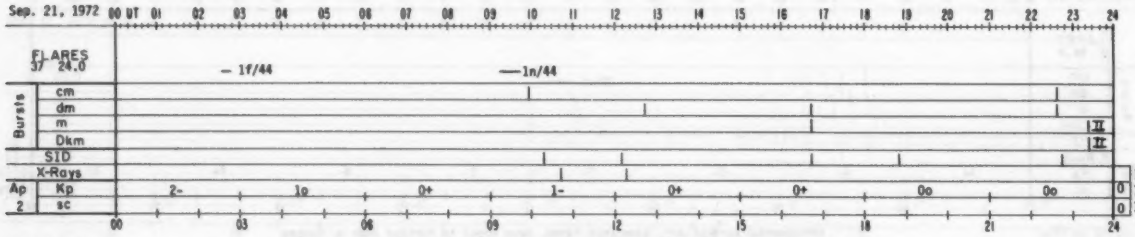
105 10 cm flux
33 Rz
CMP 12035 N12 (18987) N11 β CMP Sept. 18
12032 S01 (2)

One of ten most magnetically quiet days, extremely quiet after 0900; br. green corona 7 days earlier on NE limb.



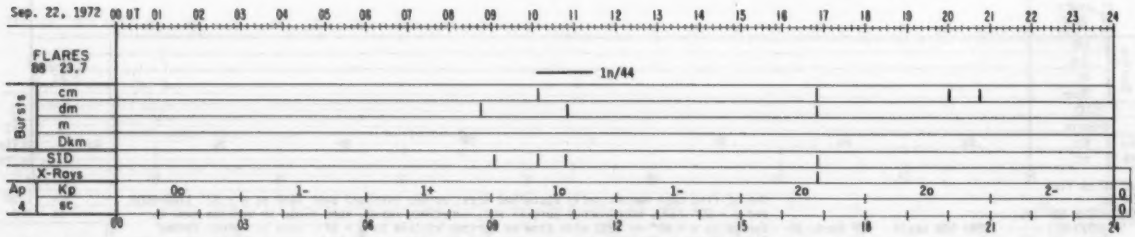
112 10 cm flux
47 Rz
CMP (12037) S38
12039 S11 18989 S11 (βp)3
12036 N11 (2) 18990 N09 (αp)1

One of five most magnetically quiet days.



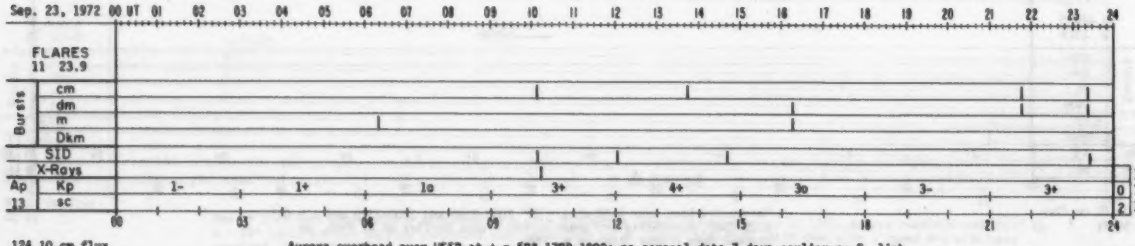
112 10 cm flux
60 Rz

One of five most magnetically quiet days, extremely quiet after 0300; no coronal data 7 days earlier on E. limb, moderately br. green corona 7 days later on SW limb.



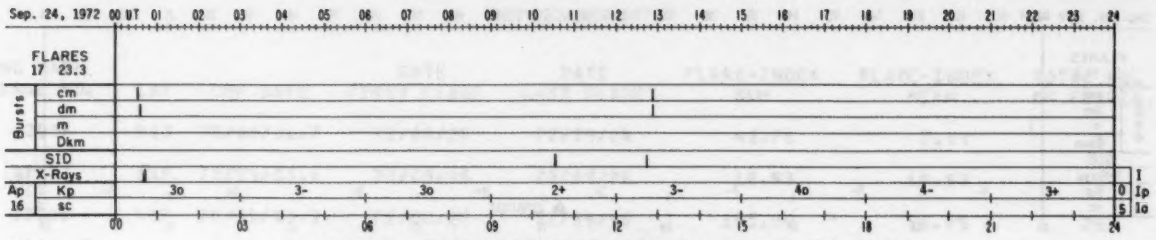
119 10 cm flux
69 Rz
CMP 12040 S14 (3) 18991 S15 αp CMP Sept. 23
(12050) N17 (18994) N15 β
(18995) N17 (β)2

One of five most magnetically quiet days; no coronal data 7 days earlier on E. limb, moderately br. green corona 7 days later on NW and SW limb.



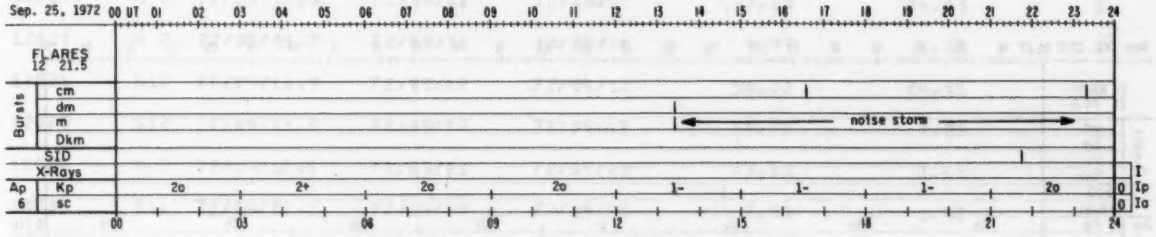
124 10 cm flux
65 Rz

Aurora overhead over USSR at ϕ = 59° 1700-1800; no coronal data 7 days earlier on E. limb.



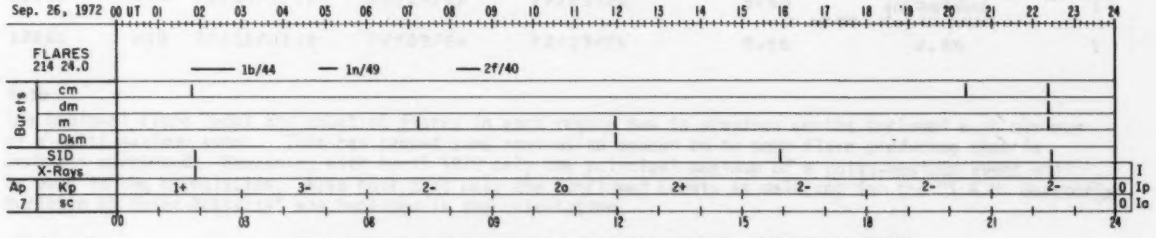
126 10 cm flux
77 Rz

Aurora overhead over USSR at ϕ = 59° 1800-1900; moderately br. green corona 7 days earlier on SE limb, very br. green corona 7 days later on NW and SW limb.



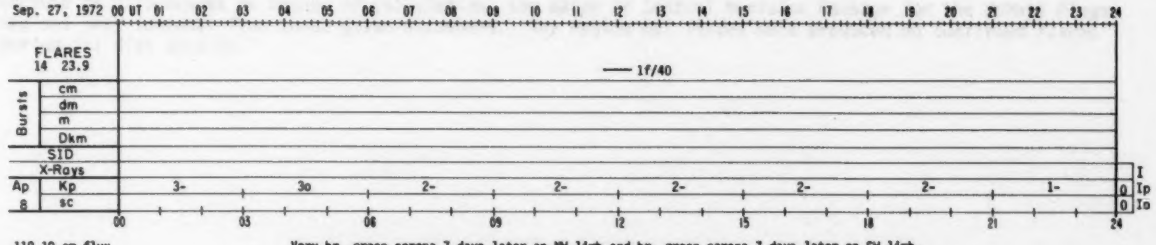
126 10 cm flux
82 Rz
CMP 12042 S18 (3)

Br. green corona 7 days earlier on SE limb and 7 days later on SW limb.



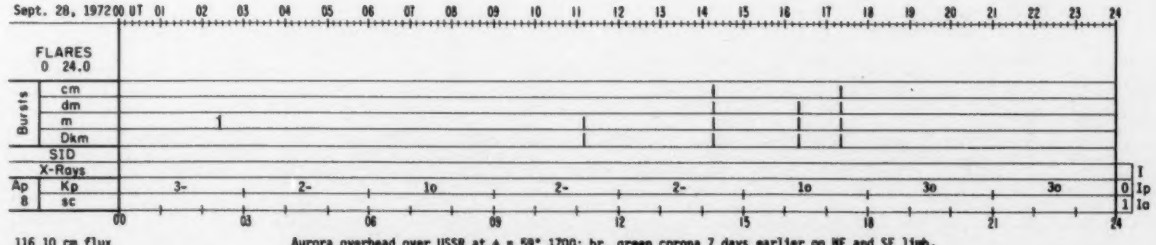
122 10 cm flux
78 Rz
CMP 12044 S05 (3) 18992 S05 (δ)5

Very br. green corona 7 days later on SW limb and br. green corona 7 days later on NW limb, moderately br. green corona 7 days earlier on NE and SE limb.



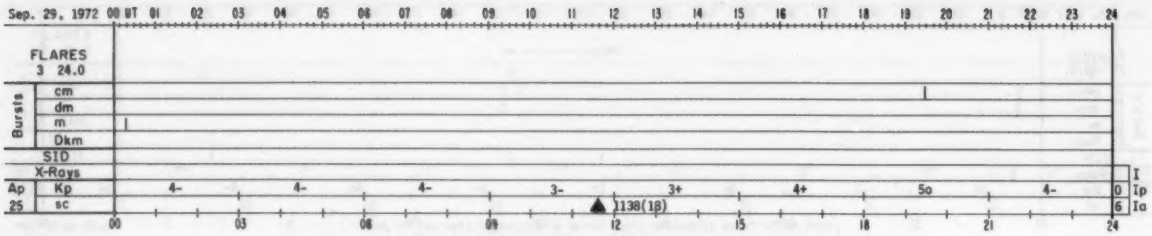
118 10 cm flux
77 Rz
CMP 12045 N14 (4)

Very br. green corona 7 days later on NW limb and br. green corona 7 days later on SW limb, moderately br. green corona 7 days earlier on NE and SE limb.



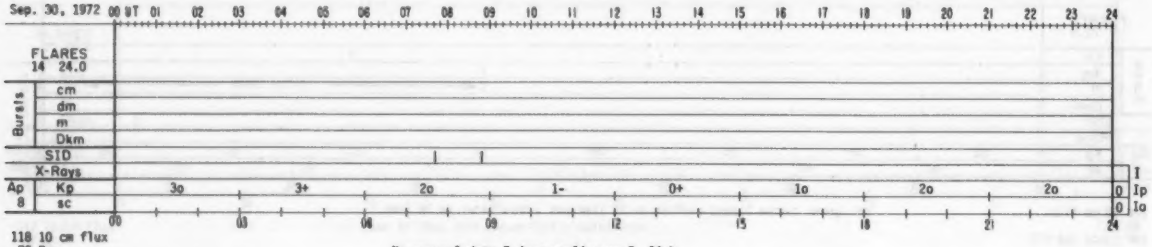
116 10 cm flux
67 Rz
CMP 12046 N08 18993 N07 8
(12055) S13
(12064) S03

Aurora overhead over USSR at ϕ = 59° 1700; br. green corona 7 days earlier on NE and SE limb, moderately br. green corona 7 days later on NW and SW limb.



115 10 cm flux
70 Rz

One of five most magnetically disturbed days, with moderate activity all day; very br. green corona 7 days earlier on NE limb and moderately br. green corona 7 days earlier on SE limb and 7 days later on NW and SW limb.



118 10 cm flux
75 Rz

No coronal data 7 days earlier on E. limb.

CMP 12048 N20 (3) (10998) N27 β
(12065) S13
12049 S10 10996 S08 (αp)4
10997 S09 (β)4
(10999) S14 (αp)1 CMP Oct. 1

REGIONAL FLARE INDEX

SEPTEMBER 1972

MC MATH PLAGE NO.	LAT	CMP DATE	DATE FIRST FLARE	DATE LAST FLARE	FLARE-INDEX SUM	FLARE-INDEX MEAN	TOTAL NO. OF FLARES
12007	N13	72/08/31.7	72/08/25	72/09/04	42.76	3.89	6
12022	S16	72/09/03.1	72/09/06	72/09/06	10.53	10.53	1
12011	N17	72/09/03.3	72/08/27	72/09/10	151.29	10.09	24
12014	S23	72/09/04.2	72/08/28	72/09/05	58.60	6.51	5
12016	S 8	72/09/04.9	72/09/02	72/09/07	147.19	24.53	5
12023	N 7	72/09/05.7	72/09/10	72/09/10	4.37	4.37	1
12021	N17	72/09/10.9	72/09/10	72/09/13	96.03	24.01	3
12028	S12	72/09/15.0	72/09/13	72/09/17	19.77	3.95	2
12034	N 7	72/09/17.6	72/09/21	72/09/21	3.03	3.03	2
12039	S11	72/09/20.2	72/09/22	72/09/25	7.59	1.90	2
12040	S14	72/09/22.3	72/09/16	72/09/27	257.44	21.45	10
12044	S 5	72/09/26.5	72/09/21	72/10/01	161.37	14.67	15
12045	N14	72/09/27.5	72/09/22	72/09/22	5.60	5.60	1
12051	N19	72/10/01.2	72/09/24	72/09/24	0.66	0.66	1

Note:
The Regional Flare Index and count of flares in each region has in previous months included each maximum of a multi-maximum event. This has caused some regions to appear to be more flare producing than is probably warranted. Beginning with April 1972 only the principal maximum of a multi-maximum event will be used in the calculation. Also note that only the Confirmed Events as selected for the "I.A.U. Quarterly Bulletin on Solar Activity" are included in the calculation.

Because of differences in method of calculation, the dates of Central Meridian Passage for the McMath Plage Regions vary somewhat from those given elsewhere. Any region not listed here produced no confirmed flares during its disk passage.

REGIONAL PLANE INDEX

SGD 344 Part II (Comprehensive)

MISCELLANEOUS DATA

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For explanations of the data contained herein see "Descriptive Text" published as supplement to February 1973 "Solar-Geophysical Data" (Number 342).

SELECTED SOLAR EVENTS

JANUARY 1973

Culgoora

UT Date JAN 1973	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
7	6d2300	0500	160 80	.1 .2	5 0	ℓ	1-2	I	Increased emission from persistent storm centre (observed Jan 2-12)
	0028.5	0034	160	.7	290	0	3	III GG	
8	0107.5	0111	160	.7	290	0	3	III GG, V	
	2340.5	2346	160 80	1.1	300	0	3	IIIGG,V,U	Complex source structure.
11	0054	0101	80	1.2	300	-	3	IIIGG,V, II, IV	Multiple sources. Polz.not recorded.
	0118	0204	160 80	1.2 1.5	300	- -	1 2	IV	Polz.not recorded.
12	0135	0138	160 80	1.1	320	0	2	IIIGG, U	Double Source

Days without Heliograph observations: 3, 10, 16, 21, 22, 31

Publication Notice

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(Prepared by World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado)

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